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**POST-ARAB SPRING GOVERNMENTS IN NORTH
AFRICA: IDENTIFYING FOCUS AREAS FOR
ECONOMIC ADVANCEMENT**

by

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FOCUS AREAS FOR ECONOMIC ADVANCEMENT**

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ABSTRACT

The power transitions precipitated by the Arab Spring revolutions afford opportunity for significant positive political and economic change. However, the specific areas in which improvement is most essential to generating economic advancement are less obvious than those associated with improved governance, and are less likely to be uniform across all countries involved. In consideration of that assertion, this thesis identifies areas most correlated with economic growth, the fostering of a positive entrepreneurial environment and progression to a more advanced economic stage of development through employment of two distinct statistical methods, and applies them to the North African countries affected by the Arab Spring revolutions. Areas in which improvement is required to create positive change that are specific to the country being studied are thereby determined. The cases of pre-Arab Spring Libya, Tunisia and Egypt were examined in an attempt to provide guidance and focus for the enormous tasks of governmental construction and reform the incoming administrations of each country will face. The ultimate outcome of the analysis is an expression of the vicious economic cycle unique to each, including a determination of causal factors identified as areas in which improvement will be most likely to favorably transform their economies.

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LIST OF ACRONYMS AND ABBREVIATIONS

- BTI—Bertelsmann Transformation Index
- EDB—Ease of Doing Business
- GCI—Global Competitiveness Index
- GDP—Gross Domestic Product
- GNI—Gross National Income
- HDI—Human Development Index
- HDR—Human Development Report (Rankings)
- HH—Heritage House
- MENA—Middle East North Africa
- PPP—Purchasing Power Parity
- UN—United Nations
- WB—World Bank
- WDI—World Bank’s Development Indicators
- WEF—World Economic Forum
- WGI—World Bank’s Governance Indicators

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I. OVERVIEW

A. RESEARCH QUESTION

The changes in government currently occurring in the Middle East and North Africa as a result of the Arab Spring revolutions have provided an opportunity for significant positive transformation to become manifest within those countries. Particularly, there may be potential for vast economic improvement to occur in countries wherein authoritarian regimes appear to have, in many cases, stifled economic advancement through corruption, power-hoarding, or ineptitude. However, the degree to which government has been the limiting factor in the evolution of these economies, particularly when considered within the context of all countries in a similar stage of development, is unclear. Moreover, the specific areas that have constrained the economic growth and advancement of each country have not been clearly identified.

The North African countries of Egypt, Libya and Tunisia were, prior to the events of the Arab Spring, examples of countries in part defined by governmental stability coupled with less-than-optimal economic performance. As those regimes have completely eroded and ceased to exist, the areas in which those governments contributed to and exacerbated the inability of the respective countries to advance toward more prosperity should be considered. There may then be potential to determine upon which areas post-Arab Spring governments should focus in order to most efficiently improve upon the economic performance of the previous regimes in Egypt, Libya and Tunisia. This thesis will attempt to elucidate that subject, through determining which factors—both within and separate from government—have been most responsible for the relatively poor economic performance of those three countries when considered on a global scale. Additionally, it will help to provide a blueprint for the incoming governments of each country by identifying areas that, if properly reformed, may increase growth and foster an environment conducive to increased entrepreneurship leading to improved macroeconomic performance.

B. IMPORTANCE

This work will generate significant conclusions with respect to the structure and/or policies required of the new governments installed in the North African countries to produce positive economic results. Moreover, the specific areas where the previous governments were particularly weak will be defined and can therefore be more easily guarded against and potentially improved upon. The limiting factors precluding these countries from attaining a stronger organic entrepreneurial presence will also be determined. Those limiting factors can then become the focus for further research and potentially increased attention and strategic manipulation in the future.

The occasion to create a new government, complete with new processes and structures, and with the potential to both reform existing institutions as well as create new ones, is a rare opportunity that in the case of the North African countries has implications beyond the welfare of their citizenry. The future direction of these countries has significant geo-strategic implications, and the economic prosperity of the people within them will influence the political reality that will become manifest over the next several years. Therefore, it is important that a determination of which factors have limited their economic success in the past is made; and that an evaluation of what these nascent governments can do to improve upon past failures is performed. This thesis will provide such an evaluation and determination through analysis of empirical data taken from the pre-revolution era. It will produce results that will be useful regardless of the areas in which each government is found to have fostered a negative economic environment in the past. While the findings of this research will only present a partial picture of the synthesis between government and economy within each country, it will produce strong evidence regarding which areas of each economy should be the focus not only of further research, but also of the incoming governments of Tunisia, Libya and Egypt.

C. PROBLEMS AND HYPOTHESES

The hypothesis that served as the genesis for this work is that specific areas of governmental ineptitude have produced, to a greater degree than average, the relatively poor economic performance of Egypt, Libya and Tunisia. This supposition implies that

the potential for significantly improved economic performance exists if these areas are improved by the incoming governments. It is likely the evidence will show that all three countries can appreciably improve their economies with focus on the proper areas. The initial problem, then, is to determine which factors are the most influential in limiting countries' economic advancement depending upon what level of economic advancement they currently enjoy. It is then important to determine in which of these factors a particular government has underperformed relative to other countries at a similar development level. This will provide evidence regarding which factors most significantly constrain the advancement of the particular economy being studied to a more developed stage might be. These problems will be addressed and through the results of the research undertaken herein.

A second underlying hypothesis of this work is that the governments of these three countries failed to provide the proper incentives to appropriately promote entrepreneurship—thus retarding economic growth. Accordingly, this thesis will consider the potential for economic improvement through the fostering of organic entrepreneurship within each country as outlined in the nascent field of expeditionary economics. Following the crisis that resulted in a change of government in each case, this field of study suggests that a more effective approach to improving economic circumstance involves the international community helping to create an environment conducive to increased firm creation and growth. This is in direct contrast to the current construct, which is most heavily reliant upon how much economic aid to appropriate and how to administer that aid to the post-conflict/crisis state. In order to effectively determine a method of creating an environment conducive to entrepreneurship in each country, the specific areas that have prevented such an environment from existing in the past must be determined. This thesis will provide empirical evidence that will identify these problem areas in the three countries upon which the study focuses. The identified areas can then be prioritized as topics requiring increased attention by both the incoming governments and the international community.

D. LITERATURE REVIEW

Significant amounts of literature have been produced for the cases of Egypt, Tunisia and Libya evaluating the economic effects of their respective governmental policies. However, as a work of empirical scholarship, this thesis will not rely upon any of these for support, but rather will produce an analysis supported solely by the quantitative evidence that will be derived herein. Regardless, an exploration of pertinent literature is required for methodological explanation and clarification as well as to address work providing either support or potentially conflicting analyses for the conclusions obtained. In order to achieve the necessary degree of understanding for this subject matter, two separate areas of information must be examined. First, an overview of some of the most important work regarding the political economies of North African countries, and the prospects for growth as a result of the Arab Spring will be examined. This will be followed by a review of works pertinent to the methodological structure logic of the approach of this thesis as well as an overview of the field of expeditionary economics.

There is a consensus within the literature that the pre-revolution governments of these three countries had an on-balance negative effect on their economies. Henry and Springborg explain that prior to the Arab Spring, both Egypt and Tunisia could be categorized as “bully states” or praetorian regimes, while the Qaddafi-led government in Libya was characterized as a “bunker state.” These were identified as the least successful categories delineated, and were shown to produce poorer results than the Middle East/North African (MENA) countries belonging to the other categories defined.¹ Julia Devlin generalizes that MENA governments have instituted unhealthy degrees of control and have fostered structures that have failed to provide the proper incentives to promote private investment and ease market entry for entrepreneurs.² While the degree to which the three countries being studied herein have been more or less successful than others in

¹ Clement Henry and Robert Springborg, *Globalization and the Politics of Development in the Middle East*, 2nd ed. (New York: Cambridge University Press, 2010), 160.

² Devlin, Julia C., *Challenges of Economic Development in the Middle East and North Africa Region: World Scientific Studies in International Economics*, Vol. 8 (London: World Scientific Publishing Company, 2010), 511.

the region is not explicitly discussed by Devlin, evidence presented throughout the work suggests that at least in the cases of Libya and Egypt, development as a result of governmental policies has lagged even the regional trends and averages. Other analyses have shown that institutional weaknesses as well as persistent social conflict (exemplified and exacerbated through the Arab Spring movement) have precluded North African economies from advancing on par with those of East Asia.³ This failure has resulted in the MENA countries being perceived as less attractive than other developing countries with which they are competing for potential international investment opportunities.

Evidence has been identified and analyzed regarding specific areas of economic improvement in some or all of these countries, though even these assessments generally conclude with a poor outlook for sustainment into the future.⁴ Creane, Goyal, Mobarak and Sab find that the financial sector including banking institutions in Egypt and Tunisia improved relatively quickly since the 1960s when compared to other countries within the MENA region, though the reforms undertaken failed to keep pace with other parts of the world, particularly Asia.⁵ The closed nature of the Libyan regime prevented its inclusion in these works due to a lack of required data, though Oliver Miles (former UK Ambassador to Libya) suggests that despite high oil prices and rescinded economic sanctions, the Libyan economy has failed to prosper, due to “the failure of the Libyan administration to adapt to the new situation, and to take the necessary operational decisions.”⁶ Robert Springborg considers Egypt due to its potential as a trendsetter in the region, and finds that the demography, macroeconomic instability and lack of security suggest an environment unlikely to transform the current destructive cycle into a more

³ Ibrahim A. Elbadawi supplies an excellent study of this phenomenon in “Reviving Growth in the Arab World,” *Economic Development and Cultural Change* 53, no. 2 (January 2005), 293–326.

⁴ See Ahmed Galal and Khalid Sekkat, “Development Prospects for North Africa,” *Economic Research Forum (ERF)*, Policy Perspective No. 1, January 6, 2010, for a discussion of the reduction in poverty in North Africa during the first decade of the new century despite poor growth. They conclude that this reduction is not sustainable without reform of governance and economic policies resulting in increased economic growth.

⁵ Susan Creane, Rishi Goyal, A. Mushfiq Mobarak and Randa Sab, “Measuring Financial Development in the Middle East and North Africa: A New Database,” *IMF Staff Papers* 53, no. 3 (2006), 508.

⁶ Oliver Miles, “Toward a Closer Relationship Between Libya and the Foreign Business Community,” in *Doing Business in Libya* (London: Kogan Page Limited, 2002), 5.

positive virtuous one wherein improved government creates better economic circumstances which in turn fosters even better governance.⁷ Most germane to the focus of this paper, Nabli, Keller, Nassif and Silva-Jauregui conclude that while the complexity and diversity inherent in the region mandates a tailored set of policies specific to each MENA country, governance reform is the avenue by which economic prosperity will most readily be achieved.⁸ The literature on the causes and relative success of the countries being studied is robust, though the general absence of identification of specific areas of insufficiency on which to focus the efforts of the international community and incoming governments provides the gap in knowledge that this thesis will begin to fill. The most significant work of scholarship in this area is the World Bank's MENA Development Report which does provide specific solutions to economic issues of advancement in the region, though these are not country-specific, but rather solutions for the region as a whole.⁹

The approach of this paper begins with the comparison of countries based on level of economic advancement. Walter W. Rostow first categorized countries via his work on economic stages which included (1) the traditional society, (2) the preconditions for takeoff, (3) the takeoff, (4) the drive to maturity, and (5) the age of high mass consumption.¹⁰ Several other methods of categorization have since been produced in an effort to facilitate comparison of countries at a similar stage of economic maturity. Jeffrey Sachs organized his economic development theory around a formula based on

⁷ See Robert Springborg, "The Precarious Economics of Arab Springs," *Survival* 53, no. 6 (2011), 85–104.

⁸ Mustapha K. Nabli, Jennifer Keller, Claudia Nassif, and Carlos Silva-Jauregui, "The Political Economy of Industrial Policy in the Middle East and North Africa," in *Industrial Policy in the Middle East and North Africa: Rethinking the Role of the State*, edited by Ahmed Galal (Cairo: The American University in Cairo Press, 2008), 128.

⁹ This refers to the analysis found in: *From Privilege to Competition: Unlocking Private-Led Growth in the Middle East and North Africa*. MENA Development Report (Washington, DC: World Bank, 2009), 16–24. This work provides the most similar analysis to this thesis, and while it is noted that the solutions roadmap presented is dependent upon each country's specific situation, there is no dedication to the particulars with respect to Tunisia, Libya and Egypt. This, combined with the unique methodology utilized herein, provides the opportunity for original research heretofore absent from academia.

¹⁰ Taken from E. Wayne Nafziger, *Economic Development*, 4th edition (London: Cambridge University Press, 2006), 128, and originally published in Walter W. Rostow, *The Stages of Economic Growth* (London: Cambridge University Press, 1962).

three stages through which a country should advance (and at which it may get stuck) defined as commercial, industrial and knowledge-based economies.¹¹ This provides a useful model and is similar to (and possibly the basis for) the template produced by the World Economic Forum (WEF), which will be used in this thesis. The WEF categorizes economies as factor-driven, efficiency-driven and innovation-driven, with pillars identified as key for economies in each stage.¹² These categorizations, along with multiple data sets that will provide the information requirements for this paper, were manipulated by Robert Looney for the purpose of creating a framework whereby the factors that have inhibited an economy from advancing can be identified.¹³ This thesis will build upon this work by determining the performance of Tunisia, Libya and Egypt in each of the limiting factors identified as most significant through Looney's methodological structure. It will then identify the areas in which the previous governments were particularly deficient, as well as the specific areas where improvements are most likely to produce stage advancement. The goal of which is to produce a result that can help to fill the gap in specific-area-need identification.

Due to the crisis resultant of the Arab Spring, the current situation can in some respects be case studies for the field of expeditionary economics. Though the original idea behind the field generally involved military involvement in the creation of an entrepreneurial model for reconstruction in the post-conflict state, the principles can be applied despite the absence of international military forces in the cases being studied.¹⁴ The potential of the individual, and the assumption that individuals will take advantage of

¹¹ See Jeffrey D. Sachs, *Stages of Economic Development*, transcript from speech given at Chinese Academy of Arts and Sciences, Beijing, June 19, 2004.

¹² Xavier Sala-I-Martin, Jennifer Blanke, Margareta Drzeniek Hanouz, Thierry Geiger and Irene Mia, "The Global Competitiveness Index 2010–2011: Looking Beyond the Global Economic Crisis," in *The Global Competitiveness Report, 2010–2011*, ed. Klaus Schwab (Geneva: World Economic Forum, 2010), 9.

¹³ See Robert Looney, "Entrepreneurship and the Process of Development: A Framework for Applied Expeditionary Economics in Pakistan," Ewing Marion Kauffman Foundation, February, 2012.

¹⁴ Carl Schramm provides the blueprint for Expeditionary Economics in, "Expeditionary Economics: Spurring Growth After Conflicts and Disasters," *Foreign Affairs* May/June (2010): 89–99. According to Robert Looney, in more recent correspondence with the Kauffman Foundation, expeditionary economics has evolved into the development of an entrepreneur-based model for reconstruction in any post-crisis situation, regardless of military involvement. This is due to the unlikelihood of interventions similar to Iraq and Afghanistan in the future.

economic opportunity if properly incentivized to do so, is the foundation upon which both expeditionary economics and the examination of factors limiting the fostering of entrepreneurship contained herein are founded.¹⁵ This foundation will be applied throughout the analysis presented in the cases of Egypt, Libya and Tunisia.

E. METHODS AND SOURCES

The methodology of this thesis is based on the presumption that each country's particular circumstances are to a large degree resultant of governmental policies in particular areas, rather than their poor performance being a result of their particular circumstances.¹⁶ While this thesis does not dispute that factor endowments and geography (among other things beyond the control of government) are important to the economic prospects of any country, it is the supposition of this paper that the policies of any government can and should be tailored to produce the most favorable result. These policies will be in part based on the natural resources and geography of the country. However, the factor endowments of a country are represented within the data being examined. For example, Libya is endowed with significant hydrocarbon resources not enjoyed by Tunisia. However, based on the data regarding its manufacturing sector, tourism, etc., its per capita GDP should be significantly lower than actual. The oil endowment of the country is therefore captured in the data since its per capita GDP is higher than would be anticipated had it not existed. Of course, this is a simplified example attempting to explain complex and inter-connected economies, but the premise is clear. Therefore the areas in which each country performs particularly poorly are deemed to be a result of policies that fail to take advantage of the circumstances within the country—not a result of the existence or lack of any particular endowments. In other words, the proper policies can create a relatively favorable result regardless of the specific circumstances that are beyond the government's control—though it is quite

¹⁵ See multiple examples of the application of Expeditionary Economics in the Kauffman Foundation Research Series: *Expeditionary Economics*, November, 2010.

¹⁶ Paul Collier and David Dollar, "Can the World Cut Poverty in Half? How Policy Reform and Effective Aid Can Meet International Development Goals," *World Development* 29, no. 11 (November 2001): 1787.

likely that proper policies combined with favorable endowments can create an even more favorable result than good government without those endowments.

As previously described, an empirical analysis of both governmental areas of underperformance retarding growth and entrepreneurship as well as factors constraining the economic development of these countries to a more advanced stage is particularly valuable due to the current situation in which significant change to structure and policy is inevitable. The data requirements and methodology to be utilized in this study to meet these ends involves what can be described as a statistical comparative analysis. There are two statistical methods that will be used to generate the results for this research. The first is discriminant analysis. It is essentially a method that, through statistical means, allows one to determine which factors of the set being examined distinguish a particular group (in this case, a group of countries) within a more general one. In other words, it can explain (at least to some degree) the most important variables that must be changed and improved in order for a country to be reclassified to a more advanced category. If a main criterion being used to classify countries is income measured via purchasing power parity GDP per capita (as it is in the categorization method used by the Global Competitiveness Report), then the conclusion is that improvement in variables identified as statistically significant in classifying countries to the next stage of development will lead to macroeconomic success.¹⁷ The 12 pillars of the WEF Global Competitiveness Index (GCI), the six indicators of governance provided by the World Bank, the 11 dimensions of Economic Freedom found at Heritage House as well as the 17 dimensions of transformation found in the Bertelsmann Transformation Index will be used to this end.¹⁸ This will also be used to determine the most significant variables for the Middle East/North African (MENA) countries as compared to the world as a whole.¹⁹ Upon determining these most statistically significant factors, an examination of the

¹⁷ There are actually two criteria used for country classification, GDP per capita at market exchange rates, and percentage of exports made up by minerals. This is explained in detail in Chapter II as referenced in: World Economic Forum, *The Global Competitiveness Report 2010–2011*, 10.

¹⁸ The utilization of each dataset will be explained more comprehensively in Chapter II.

¹⁹ It may be necessary to omit Group 5 countries from the general population since they are at the most advanced stage of development, and therefore cannot move to a progressively “better” group.

performance of the particular country being studied in these areas can determine the areas most likely to produce significant positive change if focused upon and improved.

The second method to be used is factor analysis, which is a technique of reducing data sets with many different components to determine how many distinct phenomena are being measured.²⁰ The component data from the previously identified data sets will be combined into a single data set, and the factor analysis will categorize each indicator into a titled phenomenon—the variable components of which are related to a degree of statistical significance.²¹ There is significant overlap in these data sets, though differences in methodology create different results, thus the ranking of Egypt for the factor “Rule of Law” as defined by World Governance Indicators, for example, will vary from its ranking for the same variable title in the Bertelsmann Transformation Index. These two variables, though named identically, may even be found to be measuring significantly different phenomena. Less obvious is an example of the concept of factor analysis wherein the variables are titled quite differently. Consider the World Bank Governance Indicators titled “Control of Corruption” and “Government Effectiveness.” Through the executed component analysis executed, they may be found to be measuring much the same phenomenon, while “Political Stability” from the same data set may be measuring something distinctly different from those, but much the same as Heritage House’s variable of “Trade Freedom.”²²

Intermediate variables used as proxy measures for economic growth and strength of the entrepreneurial environment will be added to the dataset described above and included in the factor analysis. These dependent variables and the different components of the independent variables in the data sets used can be categorized efficiently through this method. The goal of this reclassification will be to find which category each of the

²⁰ See Robert Looney, “*Entrepreneurship and the Process of Development: A Framework for Applied Expeditionary Economics in Pakistan*,” Ewing Marion Kauffman Foundation, February 2012, 33–34, for an explanation of factor analysis and its use in this setting.

²¹ This information will be augmented by other data taken from the World Bank Development Indicators, Human Development Indicators, Doing Business variables and other data sets as required, and will be further explained in Chapter II.

²² This is merely an example provided for illustrative purposes, and is not meant to imply that this will actually be derived as stated.

components of all data sets examined fit into, and which factors the intermediate variables of Growth and Entrepreneurship are most closely associated with. The result of this analysis is that the factors that are actually measuring performance of metrics that are highly associated with the dependent variables will be identified for the specific group of countries of interest in a particular portion of the study.

While the determination of categories will be the result of rigorous statistical analysis using the appropriate software, the titling of the categories determined will largely be an exercise in common sense. In other words, after looking through the variables determined to be in the same category, they will then be titled based upon what the preponderance of factors were originally named, and what the sum of the variables seem to indicate is being measured. Combining the results from the two analyses, the factors most important to economic growth, creation of a positive entrepreneurial environment and advancement in economic stage can be determined.

Finally, the empirical data representing the identified critical factors, taken from these economic and governmental performance data sets, will be examined for each country, and will then be compared to the mean values of groups of countries similar in a particular aspect of development to the country being studied. In general, these groups are the group of countries in the MENA region, due to the similarities in culture, religion and factor endowments, and the group of countries identified by the World Economic Forum as being in the same stage of development as the countries of interest. Each country will be considered separately, and will not be compared to one another outside of the fact that they will contribute to the mean value of the MENA group, and potentially to the development stage group as well.²³ This comparison will provide the ultimate result—which areas, identified as critical and strongly influenced by governmental policies and structures, require improvement in order for each country to grow economically, to move to the next stage of development and to create a positive

²³ According to the World Economic Forum's classification system, Libya and Egypt are both in the group of countries in transition from factor-driven to efficiency-driven economies, while Tunisia is in the group of countries identified as efficiency-driven. Therefore, Tunisia will not be included in the comparison of Libya or Egypt versus countries at a similar development stage, though the latter two will be included in the data for the other's analysis.

entrepreneurial environment.²⁴ Identification of these critical factors in which each country must improve will provide country-specific focus areas to a literature that largely lacks empirical rigor for the solutions advanced.

F. THESIS OVERVIEW

As generally described above, the analysis produced in this paper will be conducted in three separate steps. First, a general assessment of the effectiveness of each pre-revolution government will be provided. This portion of the analysis will be executed with the least rigor, and is included only to determine a baseline for the analysis to follow. The main two sections will be accomplished by addressing five questions. The answers found will provide the evidence required to answer the research question as applied to the specific circumstances of each country. The first four questions comprise the second portion of the analysis and will determine the critical areas of pre-revolution government ineptitude. These are: (1) which factors are most important in creating economic growth for each country based upon its stage of development? (2) Which areas are the most important to fostering an environment conducive to entrepreneurship for each country based on its development stage? (3) Which factors are the most important to economic stage advancement for each country based on its current development stage? Finally, (4) in which of these identified areas of importance did the pre-revolution governments underperform as compared to countries at a similar stage of development and/or regional associational group? This will provide a roadmap of key areas for the incoming governments of each country to focus upon in order to spur economic growth and facilitate entrepreneurial-based remedies to economic issues in the post-revolution states.

The final stage of the analysis will assess the recent condition of each area identified as lacking in order to create a logic explaining the poor performance of each

²⁴ For example, the factor analysis for Egypt might find that 11 different variables from the combined data set are measuring governmental performance in some way. The discriminant analysis might find four different factors identified as critical for advancement from Group 2 (Egypt's current WEF classification) to Group 3. Of these four critical factors, two of them are among the 11 that are measuring government. These two factors can then be compared to other groups and potentially be identified as areas upon which the new government should focus, should they be found to be underperforming, or even performing in-line with similar countries.

economy. This will ultimately find an answer to: (5) based on an assessment of pre-revolution government performance in the identified critical fields, how did these variables interrelate to form vicious cycles of economic ineptitude? While the veracity and sourcing of the numbers that will be relied upon is contentious and undoubtedly tell only a portion of the story, these are the best sources of information available and are used extensively throughout economic research. Use of these datasets is only one method of producing evidence identifying critical governmental focus areas, but is required for the form of analysis upon which this paper will rely.

The first portion of the analysis will, through a comparison of “expectation metrics” such as per capita GDP and foreign aid via direct investment with measurements of human development described by education, infrastructure and healthcare metrics, determine a baseline of pre-revolution governmental performance. The validity of the results produced by an analysis such as this is somewhat dependent upon the degree to which the unique circumstances of a country are manifest within the numbers used. While this is a matter of debate, it is my contention that the macroeconomic metrics indicating the level of advancement a country *should* have, when viewed over time, encapsulate the historical circumstances unique to that country, and are conveyed therein. Therefore, if compared to the more pragmatic assessments of the conditions of the populace within a country (described by human development metrics), a general picture of the effectiveness of government—complete with context unique to that country—is revealed.

The next portion of this study will be accomplished by conducting an analysis comparing the performance of Libya, Tunisia and Egypt in key metrics to the average performance of countries in the same region as well as those at the same stage of development. To achieve this, the results of the factor and discriminant analyses of the development groupings in which each country is a member will be utilized to determine the metrics upon which a comparison should be made. These metrics are thereby specific to each country based upon its development level. To identify particular areas in which the pre-revolution governments inhibited progress, the relative strength in indicators that showed strong associational links with growth, entrepreneurship or stage advancement

compared to similarly developed economies as well as regional competitors will be determined. From this analysis, the particular areas of governance and policy that were limiting in each country will be derived, which will ultimately provide areas of focus for both the incoming governments and the international community in an attempt to increase prosperity through the fostering of firm creation and growth within each country. Finally, an evaluation of the condition of each identified area of underperformance in the pre-Arab Spring environment will be conducted. This brief examination of the factors found to have been most constraining will ultimately illuminate each country's economic vicious cycle, and will depict the areas in which improvement may transform that cycle into a virtuous one.

II. AN ANALYSIS OF ECONOMIC ADVANCEMENT OF DEVELOPING COUNTRIES

A. INTRODUCTION

The results from the empirical analysis contained in this chapter will provide answers to the following questions: which factors are most relevant to improving economic growth at each development stage? Which factors are most relevant to fostering entrepreneurship in each stage of development? And most pertinently, which variables are most relevant in facilitating economic advancement to a more progressive stage of development? All results established in this chapter are general conclusions that are applicable to any developing country. The specific analysis of the three countries to be investigated in this paper will be executed using the results from the general study contained herein.

In order to ensure the context of this chapter is understood, the method whereby the results from this chapter will be used to produce conclusions of value regarding the particular cases of Libya, Tunisia and Egypt will be briefly outlined. First, subsequent chapters will analyze the performance of each North African country being studied in the areas determined to be significant via the data derived from this analysis. The specific areas that are both essential for economic advancement and that were being poorly executed by the pre-Arab Spring regimes in each country will then be identified. Through this process, a prioritization of crucial factors demanding improvement that is tailored to the particular country being studied will emerge. Finally, the identified key factors will be briefly examined within the context of each country's particular pre-Arab Spring structures. These are presumed to in large part be the consequence of governmental policies and their execution, and are therefore within the purview of incoming governments to change. The ultimate goal is to elucidate not only the key factors wherein improvement will most likely result in economic improvement, but also to provide explanation regarding the manifestation of vicious cycles that have inhibited economic growth and advancement in each case.

B. EXPLANATION OF DATASET

The World Economic Forum (WEF) provides an efficient and useful method of categorizing countries via economic development stage that will be used in this thesis. In this system, there are three classifications of economies (factor driven, efficiency driven and innovation driven) with two intermediate stages for economies in transition from one stage to another. There are two criteria used to determine each country's stage of development.

The first is the level of GDP per capita at market exchange rates. This widely available measure is used as a proxy for wages, because internationally comparable data on wages are not available for all countries covered...A second criterion measures the extent to which countries are factor driven. This is measured by the share of exports of mineral goods in total exports (goods and services), assuming that countries that export more than 70 percent of mineral products (measured using a five year average) are to a large extent factor driven.²⁵

The actual levels of per capita income used to classify each country are shown in Table 1. However, since the dataset being used in this paper (which will be more thoroughly examined in the following paragraphs) consists of only developing economies, there are very few stage 3 economies included in the study. Moreover, the goal of the study is to determine areas most significant in constraining the economies of three countries that are either in transition from stage 1 to 2 or in stage 2. Therefore, all countries analyzed through this model must pass through the transition phase before reaching stage 3. Thus, economies that are either in transition from stage 2 to 3 or in stage 3 have been combined into a single group. This results in the final grouping of countries used in this study, with the first three groups mirroring the stage 1, transition from stage 1 to 2 and stage 2 construct of the WEF, and the final group entailing all remaining countries. It is also important to note that the extent to which a country is factor driven can significantly influence categorization of the income groupings represented in Table 1. For example, Libya maintained a per capita income on the high end of the transition between stage 2 and 3 (approximately \$13,000–\$16,000 over the last few years of the Qadhafi

²⁵ Xavier Sala-I-Martin et.al., *The Global Competitiveness Report, 2010–2011*, ed. Klaus Schaub (Geneva: World Economic Forum, 2010), 10.

regime) but is classified as a country in transition from stage 1 to 2 due to its almost exclusive reliance upon factor endowments.²⁶

Table 1. Income Requirements by Economic Development Stage

Stage of Development	GDP per capita (in US\$)
Stage 1: Factor driven	< 2,000
<i>Transition from stage 1 to stage 2</i>	<i>2,000–3,000</i>
Stage 2: Efficiency driven	3,000–9,000
<i>Transition from stage 2 to stage 3</i>	<i>9,000–17,000</i>
Stage 3: Innovation driven	>17,000

Source: World Economic Forum, *The Global Competitiveness Report, 2010-2011*.

To conduct the study, four datasets were combined with data from 102 developing countries. The 12 pillars of competitiveness used by the WEF, the six World Bank Governance Indicators (WB), the 11 dimensions of Economic Freedom in Heritage House's Index of Economic Freedom (HH) and the 17 criteria for political and economic transformation measured by the Bertelsmann Transformation Index (BTI) were merged into a single database. However, since the goal of the study is to determine focus areas that were most responsible for constraining these economies by the pre-revolution governments, great care was taken to use the most recent data available while ensuring data reflecting post-Arab Spring environments was avoided. For example, the most recent iteration of the Global Competitiveness Report was rejected in favor of the 2010–2011 version, since although the statistical data used by the 2011–2012 report dates to 2010 or earlier, “the Executive Opinion Survey...which includes the remaining data, was carried out between February and May 2011 and captures the turbulence and political change in the region to varying degrees.”²⁷ On the other hand, the 2012 edition

²⁶ Data from World Bank Development Indicators (accessed May 9, 2012), <http://data.worldbank.org/data-catalog>.

²⁷ Xavier Sala-i-Martin, et.al, *The Global Competitiveness Report, 2011–2012*, ed. Klaus Schaub (Geneva: World Economic Forum, 2011), 37.

of the BTI states that “the overwhelming majority of the social and political upheavals in the Arab world took place after the close of the period under review,” thus explaining the utilization of this more recent publication.²⁸

The 102 countries chosen for the study were selected pragmatically. The first criterion for selection required that the economy of the country be considered to still be developing, rather than mature. The second criterion demanded that there be data available for the country in each of the 4 data sets. Inclusion of the BTI in the study effectively ensured the first criterion was met. This is because it is an index designed to determine the effectiveness of governments in transforming developing economies into modern, mature ones, thus omitting all countries “in which economic development can be regarded as well-advanced.”²⁹ After omitting all countries included in the BTI that were not represented in at least one of the other three datasets (in accordance with the second criterion), the 102 country list emerged, with classifications as shown in Table 2.

Two dependent (or in the ultimate structure of this research, intermediate) variables have been included in the dataset with the 46 independent variables. Each of these metrics is an evaluation of a government’s performance in two key areas of the study: the effectiveness of governmental policy in spurring growth and the effectiveness of governmental policy in fostering entrepreneurship. Their inclusion was necessary to determine which group of factors representing variance in a particular phenomenon each most closely associates with. This determination will provide an answer to the question of which factors are most closely linked to a country’s performance in each of these variables. While not adequately descriptive to relate the sense of this point, for brevity they are labeled throughout this study as “Entrepreneurship” and “Growth.”

²⁸ *Transformation Index BTI 2012: Political Management in International Comparison*, ed. Bertelsmann Stiftung (Verlag Bertelsmann Stiftung, Gutersloh, 2012), 16.

²⁹ Transformation Index BTI website, <http://www.bti-project.org/index/methodology/> (accessed June 1, 2012).

Table 2. List of Countries in Study by Group

Group 1	Group 2	Group 3	Group 4
Bangladesh	Algeria	Albania	Bahrain
Benin	Angola	Argentina	Chile
Bolivia	Armenia	Bosnia and Herzegovina	Croatia
Burkina Faso	Azerbaijan	Brazil	Czech Republic
Burundi	Botswana	Bulgaria	Estonia
Cambodia	Egypt	China	Hungary
Cameroon	Georgia	Colombia	Latvia
Chad	Guatemala	Costa Rica	Lithuania
Cote d'Ivoire	Indonesia	Dominican Republic	Oman
Ethiopia	Iran	Ecuador	Poland
Ghana	Jamaica	El Salvador	Singapore
Honduras	Kazakhstan	Jordan	Slovenia
India	Kuwait	Lebanon	South Korea
Kenya	Libya	Macedonia	Taiwan
Kyrgyzstan	Morocco	Malaysia	United Arab Emirates
Lesotho	Paraguay	Mauritius	Uruguay
Madagascar	Qatar	Mexico	
Malawi	Saudi Arabia	Montenegro	
Mali	Sri Lanka	Namibia	
Mauritania	Syria	Panama	
Moldova	Ukraine	Peru	
Mongolia	Venezuela	Romania	
Mozambique		Russia	
Nepal		Serbia	
Nicaragua		South Africa	
Nigeria		Thailand	
Pakistan		Tunisia	
Philippines		Turkey	
Rwanda			
Senegal			
Tajikistan			
Tanzania			
Uganda			
Vietnam			
Zambia			
Zimbabwe			

Source: Based on World Economic Forum classifications

The Entrepreneurship variable equates to each country's value in the Ease of Doing Business (EDB) 2011 overall ranking. The reasoning behind equating EDB with a positive environment for entrepreneurial activity is quite straightforward. Put simply, "a high ranking on the ease of doing business index means the regulatory environment is more conducive to the starting and operation of a local firm."³⁰ Creation of such conditions is largely synonymous with a positive entrepreneurial environment. While this does not necessarily equate to increased entrepreneurial activity, the variable is intended to reflect the performance of the government in creating the proper environment, rather than the effectiveness of potential entrepreneurs in taking advantage of it.

The values for the Growth variable were determined through finding each country's mean GDP growth per capita (annual %) for the period of 2001–2010.³¹ Since developing economies in general have higher growth rates than more mature economies, the inclusion of only less economically developed countries (as mandated through using only countries contained in the BTI) was necessary to ensure an "apples to apples" comparison to the greatest extent possible. Although actual calculations of real economic growth require more complexity than this variable provides, it is deemed to suffice for the purposes of this study. This is because the associations this variable (as calculated herein) exhibits will help to indicate which of the independent variables are most closely related to growth at various stages of development, which satisfies its function in the analysis.

³⁰ Ease of Doing Business, Rankings, <http://www.doingbusiness.org/rankings>. One of the countries being studied in this paper (Libya) is not included in the Ease of Doing Business rankings due to lack of data. However, this omission does not significantly detract from the results, as they are intended to provide general trends and associations amongst variables, and the data of one country (regardless of its importance in this study) is not likely to appreciably change those associations.

³¹ The decision to take an average value for growth stems from the clearer picture it will provide in terms of the effectiveness of policy decisions that may not produce results immediately. Moreover, the decade-long time period of data more precisely reflects growth performance which can vary greatly from year to year. Data was taken from World Bank Development Indicators (accessed May 11, 2012), <http://data.worldbank.org/data-catalog>. All countries' data was averaged for the number of years available, if no data was available for all 10 years included in the analysis.

C. FACTOR ASSOCIATIONS AMONG VARIABLES

The first stage of the analysis required that the 48 variables in the study be reduced to determine their principal components. To that end, a statistical method of data reduction was executed to extract components of the dataset which are measuring a country's performance in largely the same element. The method of data reduction executed (factor analysis) provides a technique for answering the following two questions: (1) "how many distinct phenomena are represented" by the combined dataset?³² And (2) which of the independent variables are most closely associated with the "Growth" and "Entrepreneurship" variables.³³ Moreover, as similar analyses can be conducted for each group or combination of groups, associational trends as economies advance can be established through this methodology, and thus can help to determine tendencies regarding which factors are most important depending on development level.

Table 3 summarizes the results of the factor analysis undertaken for the dataset, inclusive of all country groupings. There were seven components identified, of which Entrepreneurship was most closely associated with the component labeled "Legal System/Markets/Institutions." The implication of this result is that a positive entrepreneurial environment requires a solid legal foundation including control of and freedom from corruption, strong property rights and good quality of regulations. Other factors such as effectiveness of government, sophistication of business and innovation are also associated with the "Entrepreneurship" variable. To a lesser degree, economic freedoms illustrated by several variables in the Heritage House dataset including Business Freedom were also associated with a positive environment for entrepreneurship.

³² Looney, "Entrepreneurship and the Process of Development," 21.

³³ Irma Adelman and Cynthia Taft Morris, "A Factor Analysis of the Interrelationship Between Social and Political Variables and Per Capita Gross National Product," in *Quarterly Journal of Economics* 79, no. 4 (November 1965), 555–578, should be consulted for an explanation of factor analysis and interpretation of its results.

Table 3. All Country Groups Rotated Component Matrix^a

	Component						
	Democracy/ Government Efficiency	Legal System/ Markets/ Institutions	Education/ Infrastructure / Technology	Fiscal Freedom	Government Spending	Political Stability	Growth/ Labor Markets
BTI Polit. Participation	.962	-.099	.033	-.007	-.027	-.019	-.069
BTI Stab. of Dem. Inst.	.961	-.036	.069	.003	-.045	-.019	-.050
WB Voice & Account.	.949	.113	.127	.055	-.034	.044	-.064
BTI Pol. & Social Int.	.931	.030	.127	-.001	-.097	-.026	-.107
BTI Rule of Law	.917	.192	.175	.102	-.071	.057	-.015
BTI Consensus-Blding	.912	.160	.136	.020	.051	.168	.007
BTI Steering Capability	.859	.224	.199	.088	.057	.116	.116
BTI Int'l. Cooperation	.759	.378	.081	.129	.232	.193	.167
BTI Private Property	.676	.472	.331	.322	.034	.008	.073
BTIOrg.of Mkt&Comp.	.674	.452	.375	.290	.033	-.014	.109
HH Invst. Freedom	.637	.292	-.033	.535	.088	-.013	.054
BTI ResourceEfficiency	.610	.539	.332	.131	.056	.275	.090
BTI Stateness	.578	.224	.372	.014	-.147	.480	.214
BTI Curr. &Price Stab.	.571	.348	.282	.316	.312	.200	.097
BTIMgmt.Lev of Diff.	.536	.268	.683	.229	-.151	.189	.021
WEF Institutions	-.096	.877	.171	.112	.026	.242	.040
WEFGoodsMktEfficy	.037	.840	.280	.256	.182	-.003	.011
HH Freedm from Corr.	.321	.781	.315	.190	-.018	.266	-.081
WB Control of Corr.	.350	.761	.238	.203	-.023	.299	-.102
HH Property Rights	.420	.745	.215	.222	.043	.089	-.047
WEF Innovation	.065	.736	.478	-.207	.146	.050	.079
WEFFinancialMkt Dev.	.202	.733	.249	.096	.194	-.215	.034
WB Rule of Law	.402	.728	.344	.186	.011	.225	.039
WB Govt.Effectiveness	.362	.706	.479	.203	.026	.120	.042
WEF Bus. Sophist.	.097	.692	.556	-.016	.272	-.138	-.064
Entrepreneurship	.194	.599	.391	.471	-.025	-.110	.226
WB Regul. Quality	.535	.588	.308	.438	.107	.034	.136
WEF Hig Educ. & Trng	.240	.408	.806	.165	-.097	.018	.061
WEFHealth& Pri.Educ.	.080	.197	.805	.306	-.007	.050	-.017
WEF Market Size	-.040	.102	.698	-.316	.356	-.310	.077
WEF Infrastructure	.080	.607	.678	.200	.052	.103	-.033
WEF Tech. Readiness	.245	.558	.677	.238	.029	.094	-.010
WEF Macro. Envir.	-.024	.320	.495	.158	.407	.299	.065
BTI Lev. Socioec Dev..	.345	.311	.774	.164	-.115	.140	.036
BTI Welfare Regime	.465	.379	.631	.145	-.131	.300	.091
BTI Sustainability	.516	.392	.620	.109	-.144	.105	.146
BTI Econ.Perform.	.346	.396	.487	-.078	.451	.257	.132
HH Fiscal Freedom	-.226	.071	.210	.678	.078	.103	-.035
HH Overall Score	.368	.581	.157	.624	.257	.033	.143
HH Trade Freedom	.420	.182	.205	.612	.093	.246	.156
HH Financial Freedom	.490	.280	.062	.615	.139	-.041	.066
HH Business Freedom	.125	.442	.346	.521	-.061	-.166	.117
HH Gov't Spending	-.221	.076	-.128	.085	.767	-.187	-.026
HH MonetaryFreedom	.325	.155	.008	.411	.600	.144	.207
WB Political Stability	.407	.447	.183	.140	-.097	.644	.114
Growth	-.029	-.238	.120	-.019	.164	.028	.820
WEFLbrMkt. Efficiency	.029	.572	-.006	.240	-.039	.166	.630
HH Labor Freedom	-.048	.496	-.023	.327	-.131	-.018	.530

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 18 iterations.

The “Growth” variable demonstrated a strong link to the status of the labor market in an economy, both its efficiency and the freedom businesses possess in its application. Moreover, these were the only other variables present in the extracted component, which may suggest a profound link between labor markets and growth. Unlike Entrepreneurship, the Growth variable did not exhibit even a remotely significant connection to any other component, again reinforcing the relationship between labor markets and Growth.

Factor analyses were also executed for separate country groups. While each country in the group is at an approximately equivalent level of development, it is presumed that those countries that have been performing most competently with respect to increasing growth and creating a more positive entrepreneurial environment will advance to progressively more advanced groups more quickly.³⁴ Thus, identifying the factors most closely associated with the “Growth” and “Entrepreneurship” variables will indicate the areas upon which a government should focus, should performance in those areas be found to require improvement. To this end, factor analyses comprising of only Group 2 countries as well as analyses consisting of only Group 3 and Group 4 countries were conducted. Since all three of the countries in this study are at least at the Group 2 level (with Tunisia being a member of Group 3), an analysis comprising of only Group 1 countries was deemed to be irrelevant. The logic of this conclusion rests in that the goal of the study is to find focus areas necessary for progression to a more advanced stage, rather than guarding against a regression to a less advanced stage of development. Thus, the effort of the study concentrated on finding both the most critical factors for the stage a country is currently in, as well as potentially the next stage in an effort to prepare for the future.

³⁴ Collier and Dollar, “Can the World Cut Poverty in Half?,” 1787.

Table 4. Group 2 Rotated Component Matrix^{a,b}

	Component							
	Corruption/ Institutional Effectiveness	Democracy / Cooperation	Economic Freedom/ Regulation	Education/ Infrastructure / Tech. Innovation	Social Welfare/ Stability	Growth/ Labor Markets	Economic Perform- ance	Macro economy / Fiscal Policy
WEF Institutions	.870	-.157	.077	.361	.003	.138	.074	.038
WB Control of Corr.	.855	.134	.229	.282	.241	-.152	.002	.055
WB Rule of Law	.845	.028	.293	.292	.155	.023	.036	.019
HH Freedm from Corr.	.835	.081	.265	.292	.230	-.026	.065	.037
HH Property Rights	.803	.237	.404	.217	.170	-.034	.156	-.020
WB Gov't Effectiveness	.789	.199	.219	.334	.213	.076	-.233	.070
BTI Resource Efficiency	.630	.400	.400	.061	.254	.143	.126	.091
WEF Goods Mkt. Eff.	.629	.026	.322	.609	-.128	.106	.119	.211
BTI Stability of Dem.	-.025	.963	.072	-.061	.026	-.040	-.036	-.024
BTI Polit. Participation	-.015	.954	.081	-.129	.103	-.024	-.039	-.079
WB Voice & Account.	.023	.936	.163	.004	.202	-.080	-.042	-.047
BTI Pol. and Social Int.	-.091	.893	.116	-.119	.036	-.078	.003	-.124
BTI Rule of Law	.186	.875	.265	-.037	.127	.052	-.049	.048
BTI Consensus Building	.285	.823	.352	-.070	.115	-.061	.117	.050
BTI Steering Capability	.255	.799	.375	.036	.045	.189	.148	.055
BTI Int'l Cooperation	.300	.620	.553	.166	.182	.165	.298	.115
HH Financial Freedom	.309	.376	.829	-.083	.053	.028	-.080	.035
HH Investment Freedom	.218	.417	.803	-.116	-.063	-.038	-.147	.067
HH Trade Freedom	.074	.213	.762	.131	.075	.274	.184	.034
HH Overall Score	.516	.219	.733	.151	.027	.193	-.126	.254
WB Regulatory Quality	.487	.325	.726	.261	.083	.151	-.075	.030
Entrepreneurship	.490	-.029	.636	.304	.072	.331	-.243	.183
BTI Private Property	.497	.385	.589	.275	.215	.118	-.012	.006
BTI Org. Mkt. & Comp.	.423	.414	.549	.407	.213	.154	.056	-.090
WEF Market Size	-.125	-.377	-.527	.456	-.194	-.142	.262	-.194
BTI Curr. & Price Stab.	.432	.351	.518	.049	-.045	.157	.471	.258
WEF Bus. Sophis.	.354	-.088	.153	.859	-.096	-.051	.195	.191
WEF High Ed. & Trning	.115	-.050	-.072	.851	.384	.141	-.166	-.023
WEF Innovation	.394	-.056	-.074	.841	.057	.097	.216	-.018
WEF Tech. Readiness	.284	-.179	.254	.807	.221	-.105	-.022	.000
WEF Infrastructure	.455	-.156	.210	.803	.079	.043	-.145	-.015
WEF Health & Pri. Educ.	.097	-.100	-.155	.701	.090	.007	-.312	.402
WEF Financial Mkt Dev.	.419	.235	.464	.622	-.014	-.115	.113	.145
BTI Welfare Regime	.196	.082	-.040	.145	.877	.133	.191	-.069
BTI Mgmt. Lev of Diff.	.194	.117	.171	.290	.809	.035	-.280	-.146
BTI Stateness	-.006	.358	.212	-.269	.779	.033	.127	-.161
BTI Lev. Socioecon Dev.	.204	.058	-.235	.459	.672	.038	.051	.261
BTI Sustainability	.437	.340	.180	.133	.608	.257	-.132	-.063
WB Political Stability	.490	.026	.476	.032	.555	.259	.283	-.089
Growth	-.309	-.162	.118	-.262	.113	.764	.040	-.022
WEF Lab Mkt. Efficiency	.268	.149	.439	.202	.313	.703	.150	.006
HH Labor Freedom	.313	-.059	.300	.231	.128	.703	-.282	-.024
BTI Econ. Performance	.519	-.034	.054	.143	.128	.034	.727	.193
HH Business Freedom	.391	-.019	.393	.236	-.050	.246	-.666	.126
HH Gov't Spending	-.071	-.076	.146	.202	-.275	-.158	-.002	.832
HH Monetary Freedom	.229	.394	.426	-.101	-.250	.261	-.013	.549
WEF Macroecon. Enviro	.253	-.418	.077	.246	.171	.085	.289	.536
HH Fiscal Freedom	.318	-.320	.326	.035	.140	.114	.227	.351

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 13 iterations.

b. Only cases for which WEF Group = 2 are used in the analysis phase.

Source: Author

Table 4 shows the factor associations present when only Group 2 countries are considered. Consistent with the factor analysis comprising all countries, Growth is predominantly associated with labor market efficiency and labor freedom. The Entrepreneurship variable now has slightly more association with economic freedom and regulation and organization of markets than with corruption and institutional effectiveness when compared to the analysis inclusive of all countries. However, the link with corruption and effectiveness of government remains relatively strong, if now secondary.

When only Group 3 countries are considered, Entrepreneurship is most correlated with only two variables: business freedom and the macroeconomic environment. This is a significant change from the previous two analyses, though there is still some association with the Corruption/Government Effectiveness component consistent with the previous results. The Growth factor maintains its strong relationship with efficiency of the labor market, but is no longer associated with labor freedom as it was with the analyses consisting of the total sample of countries and of only Group 2 countries. Once again, there are no statistically significant relationships between Growth and any other extracted component, or the variables contained therein.

The results of the Group 4 only analysis are substantially more ambiguous and somewhat less satisfying than the previous three. Growth is associated with half of the 46 total factors in the study, detracting from the value of the factor analysis, as one of its functions is to find the areas wherein improvement will likely increase economic growth. Not inconsistent with logic or intuition, more advanced economies appear to grow most efficiently when experiencing an overall improvement in most areas, most significantly the strength of democratic processes and several of the economic freedoms measured by Heritage House. Entrepreneurship is most appreciably correlated with the efficiency of the labor markets at this level of development, as well as the sophistication of, quality of the regulation of, and freedom provided to the country's businesses. Hence, again consistent with logic, a positive entrepreneurial environment is correlated with business-centric metrics, as well as labor market efficiency.

Table 5. Group 3 Rotated Component Matrix^{a,b}

	Component								
	Democracy /Stateness/ Stability	Legal System/ Markets	Economic Freedom/ Regulations	Education/ Technology	Business / Macro- economy	Growth/ Labor Mkt.	Market Size	Labor Freedom/ Gov't Econ. Perfrmnce	Misc.
BTI Consensus Building	.962	.146	.065	.034	.001	.053	-.022	-.011	.090
BTI Political Part.	.907	-.233	.146	-.156	-.067	-.193	-.111	.003	-.018
BTI Pol. & Soc. Int.	.904	-.052	.192	.037	-.009	-.224	-.092	-.093	-.012
WB Voice & Account.	.900	-.023	.194	-.090	.032	-.226	-.119	.004	-.038
BTI Stab. Dem. Inst.	.890	-.204	.233	-.140	.025	-.122	-.036	-.015	.057
BTI Rule of Law	.882	.056	.281	.004	-.104	-.134	-.047	.112	-.150
BTI Steering Capability	.855	.127	.275	-.136	.054	.041	.152	-.076	.044
BTI Mgmt Lev. Diff.	.844	.019	-.031	.421	-.034	-.089	-.117	.051	-.009
BTI Stateness	.768	.196	-.193	.257	.123	.429	-.032	.021	-.046
BTI Resource Eff.	.658	.568	.012	.059	-.025	.055	.194	.075	-.092
BTI Int' l Cooperation	.638	.348	.405	-.082	-.117	.200	-.025	-.181	.270
WB Political Stability	.604	.468	-.220	-.033	-.027	.181	-.420	.151	.120
BTI Welfare Regime	.604	.447	-.065	.498	.056	-.057	.067	.269	-.088
BTI Org Mkt & Comp.	.602	.178	.674	-.018	-.059	.105	.182	.056	.026
BTI Sustainability	.583	.402	.024	.315	-.011	.217	.387	.021	-.278
WEF Institutions	-.185	.893	-.041	-.012	.107	.133	-.245	.098	.064
HH Freedom from Corr.	.250	.891	.221	-.015	.034	-.009	-.060	.025	-.173
WB Rule of Law	.243	.865	.130	.220	.069	-.004	-.054	.107	-.129
WB Gov't Effect.	.121	.830	.118	.194	.309	-.039	.150	-.138	.053
WB Control of Corr.	.447	.790	.227	-.011	-.004	-.105	-.017	.079	-.235
WEF Goods Mkt. Eff.	-.195	.732	.385	.053	.202	.169	-.208	-.086	.148
WEF Financial Mkt Dev.	.002	.721	.246	-.188	.214	.042	.000	-.029	.300
HH Property Rights	.142	.698	.362	.131	.119	-.419	.140	-.066	.056
WEF Bus. Sophist.	-.110	.696	.061	.174	.027	-.058	.220	-.433	.356
WEF Innovation	-.137	.696	-.303	.380	.060	.154	.335	.024	.267
WEF Infrastructure	-.207	.631	-.176	.044	.317	.084	.301	.024	.143
HH Finan. Freedom	.102	-.033	.800	-.053	.239	-.237	-.051	.037	-.023
HH Overall Score	.206	.432	.753	-.021	.338	-.144	-.159	-.042	-.054
HH Invest Freedom	.422	.097	.739	-.005	-.018	-.183	-.253	-.088	-.219
WB Reg. Quality	.314	.507	.720	.104	.227	.036	.087	-.003	.025
HH Monetary Freedom	-.192	.205	.720	-.060	.042	.145	-.253	.029	.272
BTI Curr. & Price Stab.	.296	.081	.673	-.130	-.176	-.047	.313	.227	.229
BTI Private Property	.519	.373	.634	.118	-.028	-.052	-.024	-.042	.006
HH Trade Freedom	.456	-.052	.605	-.210	.021	.171	-.209	.086	-.314
HH Fiscal Freedom	.021	-.176	.580	.360	-.072	.029	-.567	.125	-.057
WEF Higher Ed. & Trng.	-.190	.270	-.125	.836	-.104	-.055	.121	.032	.147
WEF Health & Pri. Ed.	-.166	.042	-.001	.813	-.111	.201	-.150	-.010	-.029
BTI Lev. of Socio Dev.	.409	-.020	.043	.788	.175	.077	.139	.085	-.097
WEF Tech. Readiness	.278	.474	.145	.496	.195	.055	-.003	.011	.444
Entrepreneurship	-.055	.425	.286	.062	.769	-.028	.034	.074	.003
HH Bus. Freedom	.101	.303	.297	-.021	.723	-.314	-.088	-.002	-.016
WEF Macro Environmt	-.169	.212	-.306	-.159	.647	.436	.124	-.036	.054
Growth	-.299	-.139	-.124	.196	-.120	.815	.041	-.049	-.058
WEF Labor Mkt. Eff.	-.047	.347	.270	.148	.241	.515	.064	.411	.209
WEF Market Size	-.231	-.051	-.231	.125	.019	.128	.836	-.294	.035
HH Labor Freedom	-.031	.306	.224	.033	.297	.090	-.116	.722	.095
HH Gov't Spending	-.086	.257	.080	-.173	.349	.073	.171	-.694	.074
BTI Economic Perf.	.248	.303	.042	.067	-.060	.503	.246	-.527	.394

Extraction Method: Principal Component Analysis.

a. Rotation converged in 13 iterations.

b. Only cases for which WEF Group = 3 are used in the analysis phase.

Table 6. Group 4 Rotated Component Matrix^{a,b}

	Component							
	Democracy /Economic Freedoms	Legal System/ Gov't Institutions	Business & Labor Markets	Education/ Technology	Market Size/ Infra- structure	Innovation/ Develop- ment	Monetary Freedom	Misc.
BTI Stab. of Dem. Inst.	.985	.012	-.021	.006	.037	.011	.163	.009
BTI Steering Cap.	.975	.097	-.061	-.066	-.037	-.063	.019	.120
BTI Pol. Participation	.971	-.055	-.043	-.009	.084	.135	.151	-.055
BTI Rule of Law	.971	.138	-.048	.136	.063	.037	.104	-.033
BTI ConsensusBuilding	.963	.011	-.171	.025	-.034	.054	.096	.154
WB Voice and Account	.959	.070	.004	.074	.113	.149	.118	-.147
BTI Private Property	.930	.116	.222	.112	.184	.084	.076	-.104
BTI Mgmt. Lev. Of Diff.	.924	.013	.010	.141	.206	.218	.056	-.133
BTI Stateness	.922	.024	-.065	-.145	.059	.249	.041	-.117
BTI Int'l Cooperation	.905	.210	-.054	-.035	-.109	-.316	.092	.101
BTI ResourceEfficiency	.883	.408	.019	.008	-.007	.083	-.004	.204
BTI Pol. and Social Int.	.881	.092	-.229	.347	-.024	.147	.081	-.118
WEF Macroecon. Env.	-.775	.301	.352	-.119	-.088	-.032	.249	.280
BTI Org.ofMkt.&Comp.	.773	-.016	.330	.305	.194	.095	.310	-.239
BTI Sustainability	.764	-.377	.100	.466	-.073	.192	.066	-.016
BTI Welfare Regime	.743	.116	-.224	.164	.032	.551	-.023	.084
Growth	.732	-.237	.329	-.267	-.055	.079	-.136	.447
HH Labor Freedom	-.710	.471	.017	-.061	.070	-.196	-.401	-.257
HH Fiscal Freedom	-.659	.197	.096	-.009	-.334	-.342	-.462	.267
WEF Higher Ed.& Trng.	.640	.057	.535	.474	.088	.136	-.206	.032
HH Invest. Freedom	.627	.250	.259	.379	-.494	-.091	.062	-.280
HH Trade Freedom	.601	-.317	.420	-.092	.188	.123	.548	-.022
WEF Fin. Mkt. Dev.	-.599	.562	.234	.179	.366	-.157	.032	.100
WB Political Stability	.595	.030	-.222	-.431	.342	.460	-.031	.278
HH FreedomfromCorr.	.210	.948	-.006	-.090	-.130	.103	-.071	-.037
WB Control of Corr.	.391	.888	-.118	-.160	-.011	-.073	.045	-.111
HH Property Rights	.352	.845	.286	.124	.019	.097	.066	-.224
WEF Institutions	-.464	.809	.085	-.118	-.104	-.130	-.126	.213
BTI Economic Perf.	.047	.775	-.168	.153	.481	.211	-.088	.113
HH Overall Score	-.203	.765	.413	.194	-.277	-.222	-.058	-.098
BTI Curr. & Price Stab.	.105	.717	.047	.432	.038	-.327	.256	.276
WB Rule of Law	.433	.625	.552	-.282	-.004	.031	.044	-.157
WEF Goods Mkt. Eff.	-.589	.611	.442	.094	.056	-.218	-.024	.020
WB Gov'tEffectiveness	.434	.595	.452	-.017	-.132	.010	.460	.009
Entrepreneurship	.000	-.035	.951	-.028	-.231	-.192	-.034	-.047
WEF Labor Mkt. Eff.	-.286	.182	.918	.035	.074	-.052	-.026	.099
WB Regulatory Quality	.380	.287	.748	.089	.082	.013	.401	-.177
HH Business Freedom	-.104	-.101	.742	.294	-.502	.214	-.078	-.079
HH Financial Freedom	-.271	.043	.732	.388	-.053	.139	.365	.096
WEF Business Sophis.	-.261	.529	.631	-.055	.337	-.037	-.033	.300
WEF Health and Pri.	.402	-.079	-.030	.884	-.043	-.067	.043	-.021
WEF Tech. Readiness	-.081	.122	.397	.794	-.373	.155	.155	-.042
WEF Market Size	.119	.013	-.019	-.164	.907	.202	.266	-.046
WEF Infrastructure	-.587	.310	.213	.065	-.657	-.027	.237	.096
BTI Lev. Socioecon.Dev.	.538	-.191	-.160	.028	.129	.789	.075	-.030
HH Gov't. Spending	-.226	.621	-.156	-.111	-.225	-.648	-.087	.069
WEF Innovation	-.012	.573	.491	-.047	.033	.630	.158	.062
HH MonetaryFreedom	.463	.029	.094	.433	.222	.059	.725	.000

Extraction Method: Principal Component Analysis.

a. Rotation converged in 12 iterations.

b. Only cases for which WEF Group = 4 are used in the analysis phase.

Although a more thorough investigation of the trends and implications found in this analysis will be conducted in the conclusion section of this chapter, it is appropriate to summarize a few of the findings here, before the focus changes to discriminant analysis. First, it is evident that labor market efficiency is vital to developing economies, as a catalyst for growth at lower stages of development, and as a lubricant to foster entrepreneurship at more advanced stages. This variable was found to be significant with respect to one of the intermediate variables in every factor analysis executed, and in several instances it was the only variable (or one of a very few) found to exhibit this powerful connection. Second, both business freedom and regulatory quality maintained significant relationships with entrepreneurship throughout the study, with both being found in the same factor component in three of four matrices. While likely consistent with expectations, arguments might be made for political stability, trade freedom, or several other factors to be most important to potential entrepreneurs, though this was not found to be the case. Finally, the Entrepreneurship and Growth variables were never found to be within the same identified component. While this in no way suggests that economic growth and a positive entrepreneurial environment are mutually exclusive, it does imply that the key factors required for each are likely to be independent; thus, there is not likely to be a “magic bullet” that will simultaneously improve both aspects of the economic situation within a country.

D. DISCRIMINATING VARIABLES AMONG ADVANCEMENT GROUPS

The second method of statistical evaluation used to provide the necessary data for this study is discriminant analysis. In the context of this paper, this process determines statistically significant variables in categorizing a country in a specific economic development group. It can thereby reveal which factors are most relevant in distinguishing members of one group from another, and therefore which factors most likely inhibit an economy from advancing from one development stage to the next. For these analyses, the 46 independent variables previously described were used as potential discriminants, though the intermediate variables of “Growth” and “Entrepreneurship” were omitted, as the intermediate variables in this structure (the variables that will answer the question: what most likely constrains an economy at a specific level of development

from advancing to the subsequent level?) will be revealed through the variables found to be discriminating in each analysis, rather than through an associational link. Table 7 summarizes the results of the discriminant analysis conducted for the entire sample of countries.

Table 7. Discriminant Analysis for All Groups

Variables Entered/Removed ^{a,b,c,d}													
Step	Entered	Wilks' Lambda											
		Statistic	df1	df2	df3	Exact F				Approximate F			
						Statistic	df1	df2	Sig.	Statistic	df1	df2	Sig.
1	BTI Management Level of Difficulty	.254	1	3	97.000	94.731	3	97.000	.000				
2	WEF Technological Readiness	.185	2	3	97.000	42.415	6	192.000	.000				
3	WB Voice and Accountability	.136	3	3	97.000					32.592	9	231.356	.000

At each step, the variable that minimizes the overall Wilks' Lambda is entered.

a. Maximum number of steps is 92.

b. Minimum partial F to enter is 3.84.

c. Maximum partial F to remove is 2.71.

d. F level, tolerance, or VIN insufficient for further computation.

Three variables were shown to be statistically significant in classifying countries when all economies in the study were included in the model. BTI Management Level of Difficulty, WEF Technological Readiness and WB Voice and Accountability, in descending order of significance, were able to successfully categorize 83.3% of the economies in the study into their appropriate WEF Grouping. This suggests that these three variables are particularly relevant in determining which Group a country is in, thus performance in these variables is particularly important should an economy seek to be classified differently (i.e., in a more advanced category).

To find the constraints specific to the groups containing the countries being examined in this study, discriminant analyses consisting exclusively of Group 2 and 3 economies, as well as only Groups 3 and 4 were undertaken. While similar in purpose to the analysis of the entire country sample, the results of these analyses provide a slightly different perspective in that they exclude countries performing both below and significantly above the country of interest. The value of this methodology rests in its ability to determine the variables in which a significant delta in performance equates to a

difference in categorization for a smaller and more tailored sample of countries. Thus, if a country is performing poorly in these identified variables, there is a statistical degree of certainty that they will be classified in the lower group, and vice versa. Through this logic, one can conclude that an improvement in the variables determined most significant is the most likely method through which to facilitate advancement to the next group. Essentially, this will determine the potential factors that are most likely constraining Group 2 countries from advancing to Group 3, and Group 3 countries from advancing to Group 4. Once again, results of the analysis executed for Groups 1 and 2 is omitted due to a lack of relevance to the focus countries in this study.

Table 8 shows the results of the analysis of differentiating variables between Groups 2 and 3. BTI Organization of the Market and Competition and HH Fiscal Freedom were found to be the only two statistically significant variables in classifying countries in their proper category. Using these two variables, 74.0% of countries in these two Groups were correctly classified in the category they were originally by the methodology of the WEF. Therefore, the implication is that improved performance in these variables will facilitate advancement to the higher Group.

Table 8. Discriminant Analysis for Groups 2 and 3

Variables Entered/Removed ^{a,b,c,d}									
Step	Entered	Wilks' Lambda				Exact F			
		Statistic	df1	df2	df3	Statistic	df1	df2	Sig.
1	BTI Organization of Market and Competition	.701	1	1	48.000	20.462	1	48.000	.000
2	HH Fiscal Freedom	.645	2	1	48.000	12.940	2	47.000	.000

At each step, the variable that minimizes the overall Wilks' Lambda is entered.

- a. Maximum number of steps is 92.
- b. Minimum partial F to enter is 3.84.
- c. Maximum partial F to remove is 2.71.
- d. F level, tolerance, or VIN insufficient for further computation.

The analysis inclusive of only Groups 3 and 4 had substantially different results. Once again, only two variables were statistically significant in categorizing the economies investigated in this phase, though both were variables which were not indicators in any previous stage of the study. Specifically, WB Rule of Law and BTI Level of Socioeconomic Development were together able to classify 86.4% of Group 3 and 4 countries into the appropriate WEF category. While the process through which values for these variables were originally derived will be considered in future chapters should they be deemed constraining in the case of a particular North African country, it is important to note at this juncture that the Level of Socioeconomic Development variable is a much different indicator than the WEF Groupings themselves, and it should not be taken as obvious that one would be found to be correlated to the other.

Table 9. Discriminant Analysis of Groups 3 and 4

Variables Entered/Removed ^{a,b,c,d}									
Step	Entered	Wilks' Lambda				Exact F			
		Statistic	df1	df2	df3	Statistic	df1	df2	Sig.
1	WB Rule of Law	.405	1	1	42.000	61.742	1	42.000	.000
2	BTI Level of Socioeconomic Development	.326	2	1	42.000	42.328	2	41.000	.000

At each step, the variable that minimizes the overall Wilks' Lambda is entered.

- a. Maximum number of steps is 92.
- b. Minimum partial F to enter is 3.84.
- c. Maximum partial F to remove is 2.71.
- d. F level, tolerance, or VIN insufficient for further computation.

The general sense of the empirical analysis in this section is that the factors that are most constraining to an economy are likely to change as that economy advances. While possibly only a confirmation of common sense, the study also offers specific areas that are most important to achieving this advancement depending upon the current development level of a country. These thematic areas, along with those identified as highly correlated to growth and entrepreneurship in the previous section will be used to

construct a tailored development prioritization list for the post-revolution governments of Libya, Tunisia and Egypt in the following chapters, and to explain the vicious cycles precluding each from sustained economic development in the pre-Arab Spring world.

E. INTERPRETATION OF RESULTS AND CONCLUSIONS

The two statistical methods used to conduct this study produced significant, though at times less-than-obvious results. The most striking and easily identified result was the strong correlation between efficiency and freedom in a country's labor markets and consistent economic growth, particularly at low and mid-levels of economic development. Both the strength and constancy of the factor association between those variables suggest that underperformance in one is likely to result in poor performance in the other. Thus, performance in these two independent variables (WEF Labor Market Efficiency and HH Labor Freedom) will be examined in each country case in order to derive the factors most likely to have inhibited sustained economic growth.

The second associational dynamic investigated—which factors most meaningfully relate to the creation of a positive entrepreneurial environment—produced less apparent conclusions. During the low and mid-levels of development, three basic generalizations can be made regarding the associations displayed by the Entrepreneurship variable. First, the effectiveness of government, inclusive of its ability to combat corruption, maintained a correlation with Entrepreneurship, if in some cases secondary. This suggests that the confidence instilled through decreased corruption, including the elimination of required “under the table” taxes and business expenses increases organic entrepreneurial initiative. Next, legal structures responsible for the quality of regulation and the strength of private property rights maintained a link with creation of a strong entrepreneurial environment. This confirmation of common sense was proven legitimate enough to be considered as a potential barrier to a positive entrepreneurial environment at this level. Finally, several factors of economic freedom, including business, financial, trade, investment and overall freedoms, were associated with the Entrepreneurship variable in this portion of the study. The strong distinct relationship displayed between entrepreneurship and the HH Overall Freedom score in both the analysis inclusive of all countries as well as the “Group 2

only” study implies that it may serve as a proxy for countries’ various economic freedom scores at this level, though more specifically, the three variables in the “Open Markets” category of the Index of Economic Freedom, consisting of Trade Freedom, Financial Freedom and Investment Freedom appear to have the most powerful correlation, and this estimation will be used in subsequent chapters when considering particular country performance.

As countries advance, the number of variables correlated with Entrepreneurship declined significantly. For Group 3 categorized economies, only freedom of business and the macroeconomic environment were strongly related to entrepreneurship. Several of the effectiveness of government variables including freedom from/control of corruption and rule of law, as well as legal system-oriented variables such as regulatory quality and property rights that were prevalent in the study of less advanced economies still exhibited a relationship, though less strongly. However, for the further purposes of this study, HH Business Freedom and WEF Macroeconomic Environment will be utilized as most significant, as is consistent with the empirical analysis. While not germane to the countries in this study at the present time, results for the Group 4 analysis were included both to help identify trends as well as to determine areas most important in preparation for each country’s future. The Group 4 results were interesting in that there were 5 primary variables with which Entrepreneurship were correlated; all secondary associations had completely disappeared. This suggests a more profound link between business freedom and sophistication, financial freedom, regulatory quality and labor market efficiency with entrepreneurship at this more advanced level than the correlations found at earlier development stages.

As a result of the findings of the final study, which was conducted to determine which variables were most likely to preclude a country from advancing to the next development stage via discriminant analysis, two generalizations can be made. First, there was no overlap between the variables identified as discriminating between all group categorizations in the study and those in the two studies conducted to find discriminants between two specific groups. However, particularly in the case of Group 2 countries, there was significant overlap between variables identified as constraining and variables

identified as highly associated with creation of an environment that is likely to foster entrepreneurship. The two variables identified in the discriminant analysis categorizing Group 2 versus Group 3 countries (BTI Organization of the Market and Competition and HH Fiscal Freedom) were both associated with Entrepreneurship in the Rotated Component Matrix of Group 2 countries, the former primarily and the latter with a weaker association. However, this correlation did not hold true for Group 3 countries, wherein the discriminating variables of WB Rule of Law and BTI Level of Socioeconomic Development did not have a statistically significant relationship with either Growth or Entrepreneurship in both the Rotated Component Matrix for Group 3 countries as well as for all countries. It is therefore inconclusive (and within the context of this paper, unnecessary to determine) whether the variables constraining development are also those that inhibit Entrepreneurship (or Growth).

The second generalization made from the discriminant analysis results indicates that the constraining variables identified were exclusive to the group or groups of countries being categorized. In other words, there was no overlap between results in each discriminant analysis. Thus, the factors that constrain a country from advancement evolve as a country develops. In light of these outcomes, both the variables in the discriminant analysis for all countries as well as the variables identified in results for the group a particular country is in will be examined as potentially constraining factors in the ensuing stages of analysis.

These results produce the framework that will be utilized in the following chapters of this paper. Each will apply the generalizations and interpretations of the results from the analysis in this chapter to the specific cases of Libya, Tunisia and Egypt. Specifically, each subsequent chapter will begin with a brief evaluation of the performance of each pre-revolution government (as it pertains to the economy and human development) to provide a context for the study. This will be followed by an examination of each government's performance in the factors identified in this chapter as being potentially inhibiting in at least one of the three studies conducted. Finally, specific areas wherein the government underperformed in a critical area will be briefly considered

within the specific situation of each country, creating a logical explanation for the vicious economic cycles that were at least to some degree manifest in each country prior to the Arab Spring.

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III. AN ANALYSIS OF CRITICAL ECONOMIC FOCUS AREAS FOR THE INCOMING GOVERNMENT OF LIBYA

A. INTRODUCTION

Forty-two years of authoritarian rule under Mu'ammarr al-Qadhafi resulted in the near-complete destruction of the Libyan economy. Despite significant factor endowments that enrich the country via hydrocarbon rents, the economy of Libya is widely regarded as among the most dysfunctional in the world.³⁵ From “eliminating the private sector and all private initiatives and entrepreneurship” to “buying off the population by making itself the principal source of income for most households,” Qadhafi retarded any potential for long-term development or efficient bureaucracies.³⁶ However, to some degree due to the sheer quantity of issues prevalent in post-Qadhafi Libya, answers to questions regarding how the incoming government can best foster an economic environment conducive to growth and entrepreneurial activity are difficult to ascertain. This is also true of questions concerning the crucial areas in which improvement is required for Libya to advance toward a more developed economic stage. Indeed, the most likely (and while possibly accurate, patently inadequate) response to questions regarding what must change is, “everything.” However, in consideration of the herculean task the incoming government of Libya will be undertaking, a more tailored approach to structural change, with a focus upon the critical factors most capable of achieving significant positive transformation is required. This chapter will identify, as well as examine the recent condition of, the factors that have created a vicious cycle of economic underperformance to the detriment of the Libyan population.

Results from this chapter suggest that progress in four key areas is required to best effect positive economic change in Libya. Specifically, there must be progression in the

³⁵ See Dirk Vandewalle, *A History of Modern Libya* (Cambridge University Press, 2006), 137 for a critique of the economic policies of the Qadhafi regime in the earlier portion of his administration and 199–203 for an examination of how attempts at economic reform and privatization in more recent times were undermined by a lack of required accompanying institutional reform.

³⁶ Alia Brahimi, “Islam in Libya” in *Islamist Radicalisation in North Africa: Politics and Process*, ed. George Joffé (London: Routledge, 2012), 15.

quality of the regulatory environment, the freedom and efficiency of labor markets must be improved, the population must obtain greater voice and accountability in the process of government and competitiveness and organization in economic markets must be initiated in order to remedy Libya's current economic predicament. The analysis whereby these conclusions will be reached will begin by briefly evaluating the performance of the pre-revolution government (as it pertains to the economy and human development) to provide a context for the study. This will be followed by summarizing the results of a statistical analysis of potentially constraining factors in developing economies. An examination of the Qadhafi government's performance in the factors identified via the general statistical analysis as being potentially inhibiting will then be conducted to determine the areas in which Libya most significantly underperformed. Finally, the specific elements of underperformance in each critical area will be briefly considered. This will create a logical explanation for the vicious economic cycle that was manifest in Libya prior to the Arab Spring, and will thus identify what must change to transform that vicious cycle into a virtuous one.

B. GENERAL ASSESSMENT OF THE QADHAFI REGIME

Libya, due to the vast hydrocarbon resources within its borders, is a rich country. However, the richness of a country as measured through economic data often does not equate to an improvement in the lives of the populous—this as a result of governmental policy decisions and implementation.³⁷ The degree to which the income of a country creates an improvement in the lives of its people can be measured in many ways, and is often dependent upon what a person or culture deem important. However, there are circumstances and environmental structures within a society that, when advanced, are generally agreed to improve the human condition. One well-respected measure of these conditions is the World Bank's Human Development Report (HDR). Nobel Laureate and HDR contributor Amartya Sen explains: "human development, as an approach, is concerned with what I take to be the basic development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings

³⁷ Collier and Dollar, "Can the World Cut Poverty in Half?," 1787.

live, which is only a part of it."³⁸ When these measures of human development are compared to the macroeconomic data representative of an economy, the effectiveness of governmental policies and their implementation can, at least to some degree, be discerned.³⁹ Table 10 shows the performance of Libya's government in the pre-Arab Spring era, as well as the performance of comparator countries.

These numbers suggest that the Qadhafi-led regime in Libya slightly underperformed in comparison to expectations based upon the country's income, though perhaps not as dramatically as anticipated. However, as is generally the case with all economic data, there is ambiguity in the numbers. Consider Libya when compared to fellow MENA country Kuwait, which is ranked below Libya in human development (63rd) despite a per capita income 340% the value of Libya's.⁴⁰ The data demonstrating the poor performance of the government of Kuwait are far more compelling than are those of Libya. While this in no way excuses or justifies the performance of Libya's government in failing to create an environment that "advances the richness of human life," it does suggest that this comparison may not distinguish the Qadhafi regime as particularly inept. In fact, outside of Jordan (as seen in Table 10), all MENA countries underperform in human development relative to their national income.⁴¹ This can in part be explained by cultural factors inherent in Islamic countries, where women's rights and productivity are less positively exploited than in other areas of the world. Since these metrics contribute to human development rankings, this failing may (at least partially) elucidate the consistent underperformance by this sample geographic region. It may also provide a logic regarding Libya's better than anticipated performance in HDR (despite its

³⁸ Amartya Sen, Human Development Reports web, <http://hdr.undp.org/en/humandev/>, (accessed May 11, 2012)

³⁹ See Henry and Springborg, *Globalization and the Politics of Development*, 25, for an example of the relevance and utilization of this methodology.

⁴⁰ Libya's actual GNI per capita in constant 2005 dollars in 2010 was \$15,767, while Kuwait's was \$46,428. Human Development Reports website, <http://hdrstats.undp.org/en/indicators/100106.html>, (accessed May 11, 2012).

⁴¹ Tunisia's HDI rank in 2010 (93rd) was equal to its 2010 GNI per capita rank.

slightly negative rating) as the “revolutionary leadership’s policies regarding the advancement of women have largely eradicated gender discrimination” in Libya.⁴²

Table 10. Libya and Comparators’ Economic Performance vs. “Expected”
Overall Human Development compared to Expectation from income

Country	Human Development Rank (2010)	GDP per capita in PPP terms (2007)*	GNI per capita in PPP terms (2010)	Difference in per capita GNI and HDR
<i>Percentile Rank in Parenthesis</i>				
Libya	54 out of 187 (71.1%)	50 out of 178 (71.9%)	50 out of 187 (73.3%)	-4 (-2.2%)
Kuwait	63 out of 187 (66.3%)	7 out of 178 (96.1%)	7 out of 187 (96.3%)	-56 (-29.9%)
Jordan	94 out of 187 (49.7%)	101 out of 178 (43.3%)	105 out of 187 (43.9%)	+11 (+5.8%)

*2007 data used due to lack of data availability in more recent years.

Source: International Human Development Indicators, 2011.
<http://hdrstats.undp.org/en/indicators/100106.html>

However, there are more qualitative assessments of the conditions present in Libya that suggest the data does not show the true extent of the ineptitude of Qadhafi’s government. In fact, the analysis of many scholars intimates far harsher evaluations of the performance of the Qadhafi regime than what the data suggest. There is a consensus in the literature regarding development in North Africa that, “the acute poverty and underdevelopment (principally) in the eastern regions of Libya is particularly stark, given the country’s vast oil resources and tiny population (around 5.5 million).”⁴³ This type of condemnation of Colonel Qadhafi’s management of the Libyan economy is representative of most scholars knowledgeable in the area. Thus, the general sense of both the data and the literature is that the pre-Arab Spring government in Libya failed to take advantage of its income (provided in large part from hydrocarbon rents) to improve

⁴² Bertelsmann Stiftung, BTI 2010, *Libya Country Report* (Gütersloh: Bertelsmann Stiftung, 2009), 10.

⁴³ Alison Pargeter, “Localism and Radicalization in North Africa: Local Factors and the Development of Political Islam in Morocco, Tunisia and Libya,” *International Affairs* 85 (2009): 1036.

the lives of its citizenry, despite advances in some areas such as women's rights.⁴⁴ Therefore, the opportunity exists for the incoming government to significantly improve the economic conditions present in Libya. However, determining which areas are most in need of modification for this improvement to become manifest is not obvious, and is the core of the following sections of this chapter.

C. IDENTIFICATION OF SPECIFIC AREAS INHIBITING LIBYA'S ECONOMIC SUCCESS

Results from the factor analysis as explained in Chapter II show a strong correlation between growth of Group 2 countries (including Libya) and labor markets. Both the WEF Labor Market Efficiency and the HH Labor Freedom variables exhibited a strong relationship with growth among countries at this stage of development. Moreover, they were the only factors of the 46 examined that displayed this association with growth, further strengthening the connection between these variables. To effectively utilize these results for Libya's particular situation, an evaluation of the performance of the Qadhafi regime in these metrics is required to ascertain which (if any) are likely factors in constraining growth in the specific case of Libya. Table 11 summarizes the performance of Libya in these metrics as compared to the mean values of WEF groupings as well as the average of all MENA countries.

⁴⁴ See Henry and Springborg, *Globalization and the Politics of Development*, 45, to find data showing that 93% of Libyan governmental revenues came via oil rents in 2007. Original source: International Monetary Fund Article IV Publications.

Table 11. Libya's Performance in Key Growth Metrics

Variables Associated with Growth for All Groups and Group 2 only

Metric	Libya	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean	MENA Mean
<i>Percentile Rank among sample of 102 developing countries in Parenthesis*</i>						
WEF Labor Market Efficiency	2.81 (<1%)	4.17 (37.3%)	4.07 (32.4%)	4.25 (48.0%)	4.61 (77.5%)	4.01 (29.4%)
HH Labor Freedom**	20 (<1%)	57.1 (45.1%)	57.5 (46.1%)	64.2 (59.8%)	66.4 (63.7%)	60.6 (52.0%)

*Percentile ranks of mean values are approximations based upon the rank of the country's score the mean most closely equates to.

**No data available for Cote d'Ivoire, making the sample size 101 countries for all HH metrics throughout this thesis.

Source: Author's calculations based upon data from World Economic Forum (WEF) Global Competitiveness Report 2010-2011 and Heritage House Economic Freedom Scores 2011 (HH).

The variables determined to be correlated with a positive entrepreneurial environment were more ambiguous, but consistent with the analysis provided in Chapter II, Libya's performance in those deemed most significant to Group 2 countries is provided in Table 12. Libya's performance in the variables determined through discriminant analysis to be most correlated with inhibiting advancement to the next stage of development, both in the case of all country groupings and in the analysis of only Group 2 vs. Group 3 countries, is summarized in Table 13. The summary of results represented in these tables demonstrates both Libya's relative performance in these key factors as well as the correlation that improvement in each variable has with group advancement.

Table 12. Libya's Performance in Key Entrepreneurship Metrics

Variables Associated with Entrepreneurship for All Groups and Group 2 only

Metric	Libya	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean	MENA Mean
<i>Percentile Rank among sample of 102 developing countries in Parenthesis*</i>						
WB Regulatory Quality	-1.150 (3.9%)	-.5437 (25.5%)	-.3505 (36.3%)	.1514 (61.8%)	.9611 (92.2%)	-.1227 (51.0%)
HH Property Rights	10.0 (4.0%)	29.57 (21.8%)	34.09 (45.5%)	39.11 (53.5%)	64.06 (91.1%)	41.56 (63.7%)
BTI Private Property	4.5 (11.9%)	5.514 (27.8%)	6.136 (37.6%)	7.482 (65.3%)	9.094 (89.1%)	6.531 (47.5%)
WB Control of Corruption	-1.257 (3.9%)	-.7010 (33.3%)	-.4892 (45.1%)	-.2310 (61.8%)	.6968 (91.2%)	-.1061 (68.6%)
HH Freedom from Corruption	25.0 (22.8%)	26.46 (29.7%)	31.36 (48.5%)	37.14 (64.4%)	57.81 (93.1%)	40.25 (72.3%)
HH Overall Freedom	38.6 (3.0%)	54.62 (23.8%)	57.64 (38.6%)	62.32 (59.4%)	70.60 (93.1%)	60.73 (52.5%)

*Percentile ranks of mean values are approximations based upon the rank of the country's score the mean most closely equates to.

Source: Author's calculations based upon data from Bertelsmann Transformation Index 2012 (BTI), World Bank Governance Indicators 2010 (WB), and Heritage House Economic Freedom Scores 2011 (HH).

Table 13. Libya's Performance in Key Advancement Metrics

Significant Variables in Classifying All Groups and in Classifying Group 2 vs. 3

Metric	Libya	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean	MENA Mean
<i>Percentile Rank among sample of 102 developing countries in Parenthesis*</i>						
BTI Management Level of Difficulty**	5.9 (64.7%)	3.21 (17.6%)	5.05 (50.0%)	5.92 (64.7%)	7.80 (82.2%)	5.25 (52.0%)
WEF Technological Readiness	2.87 (21.6%)	2.83 (19.6%)	3.32 (47.1%)	3.64 (69.6%)	4.53 (92.2%)	3.71 (70.5%)
WB Voice and Accountability	-1.91 (<1%)	-0.536 (35.3%)	-0.781 (32.4%)	-0.043 (63.7%)	0.499 (85.3%)	-1.11 (15.7%)
BTI Organization of Market and Competition	4.0 (8.8%)	5.51 (22.5%)	5.84 (31.4%)	7.46 (67.6%)	9.03 (88.2%)	5.97 (33.3%)
HH Fiscal Freedom	80.3 (45.1%)	77.2 (31.4%)	84.5 (68.6%)	81.4 (52.9%)	82.2 (53.9%)	89.4 (82.4%)

*Percentile ranks of mean values are approximations based upon the rank of the country's score the mean most closely equates to.

**For consistency, this metric has been rescaled to reflect higher scores equating to less difficulty (the more desirable environment).

Source: Author's calculations based upon data from Bertelsmann Transformation Index 2012 (BTI), World Economic Forum (WEF) Global Competitiveness Report 2010-2011, World Bank Governance Indicators 2010 (WB), and Heritage House Economic Freedom Scores 2011 (HH).

Libya scores below both the Group 2 mean result as well as the mean score of MENA countries in 12 of the 13 metrics found to be statistically significant in discriminating between developing countries in at least one executed model. Even more concerning, Libya's performance is significantly poorer than even the Group 1 mean score (despite it being classified as a Group 2 country) in ten key metrics and is approximately equal to the Group 1 mean in another (WEF Technological Readiness). All 11 of these metrics exhibit a positive correlation with advancement, as the mean scores increase for each progressively more advanced group of countries with the exception of a small drop in mean score from Group 1 to Group 2 in WB Voice and

Accountability and WEF Labor Market Efficiency. Libya scores above the Group 2 mean in BTI Management Level of Difficulty, and although Libya also scores significantly below the Group 2 and MENA means in HH Fiscal Freedom, there is not a clear correlation between improvement in this metric and more advanced classification, muddying the waters regarding its value in the context of this study.

Thus, eight subjects (treating the two labor market variables as a single topic, as well as the two factors involving property rights and the two measures of corruption) distinguish themselves as the most significant areas upon which the post-Arab Spring government of Libya should focus in order to most efficiently advance and grow its economy. In order to more completely understand exactly what each of these variables explains, the condition of each metric in Qadhafi-led Libya will herein be examined. Additionally, the economic vicious cycle that inhibited Libya's citizenry from achieving prosperity throughout Qadhafi's reign will be outlined and described through this exercise.

D. ANALYSIS OF QADHAFI REGIME PERFORMANCE IN KEY AREAS

The assertion that entrepreneurship was stifled by Mu'ammarr al-Qadhafi's regime is merely a statement of the obvious. It was in fact a guiding principle and purposeful manifestation of Qadhafi's method of maintaining control of the economy of Libya through centralized governmental domination of industry. While this ideology softened during Qadhafi's latter years (although the rhetoric espousing privatization and economic liberalization far outpaced its actual implementation), the repercussions from years of private sector deterioration are significant and continue to be evident in Libya today.⁴⁵ This, supported by the fact that Libya performed more poorly than even the average of Group 1 countries in *every* metric correlated with entrepreneurship in this study, dictates the separation of entrepreneurship-related variables from those of growth and stage

⁴⁵ Ronald Bruce St. John, "Libya: Reforming the Economy, not the Polity," in *North Africa: Politics, Region, and the Limits of Transformation*, eds. Yahia H. Zoubir and Haizam Amirah-Fernandez (London: Routledge), 2008, 61–62.

advancement. For these reasons, these variables will be given a more cursory treatment, followed by a more in-depth look at Libya's condition in factors relevant to the other categorizations.

1. An Examination of Variables Affecting Entrepreneurship

a. Corruption in Qadhafi's Libya

Corruption is likely the most obvious thematic area to be examined, as well as the one least in need of explanation. The level of control possessed by a small group of individuals, led by Qadhafi himself, in Libya prior to the revolution was the main ingredient in a system generally conducive to significant corruption. Stemming from a strong security sector maintained through patrimonial networks funded by hydrocarbon rents that were not subject to civilian oversight, combined with a lack of true voice in government by the populous to serve as a check to potential abuses, corruption was (and still is) systemic in Libya.⁴⁶ The business community is negatively affected both through the siphoning of potential sources of income as well as the uncertainty created by its prevalence. Indeed, corruption is perceived as the most problematic factor for doing business in Libya according to the results of the Executive Opinion Survey conducted by the World Economic Forum.⁴⁷ However, as alluded to, corruption was and is not a root cause of a poor entrepreneurial environment since it is in large part the product of a political environment that eased its perpetuation. Rather it is an intermediate issue that has significant consequences in retarding the Libyan economy, though it can likely be substantially improved through changes to the political system wherein it was created and maintained.

b. Quality of Regulation in Qadhafi's Libya

This metric is in many ways an amalgamation of other factors that will be examined later in the chapter. The economic and political regulation administered by a

⁴⁶ See Vandewalle, *A History of Modern Libya*, 206 and Heritage Foundation (accessed June 14, 2012), <http://www.heritage.org/index/country/libya> for assessments of the government of Libya that provide evidence for this statement.

⁴⁷ *The Global Competitiveness Report 2010–2011* (Geneva: World Economic Forum), 2010, 216.

government covers a vast number of areas, the laws of which combine to help create the economic environment of a country. There is substantial evidence that in the case of pre-revolution Libya, the quality of regulation was substandard, creating issues throughout the economy that were essentially caused by ineffective government rooted in poorly-conceived regulatory laws combined with unfair and counterproductive implementation. “The lack of economic data in Libya, the occasional physical destruction of state bureaucratic offices and records, and the state’s sporadic direct intervention in issues ranging from employment to price setting to property rights issues were all signs of regulatory weakness.”⁴⁸ Thus, the regulatory environment of Libya seems to be a causal factor of its poor performance, the reform of which can have second and third order effects to the benefit (or detriment) of the economic environment, inclusive of the formation of a positive entrepreneurial atmosphere.

c. Private Property Rights in Qadhafi’s Libya

Qadhafi’s vision of the utopian Libyan society was essentially a socialist construct in which the public sector dominated and creation of personal wealth was frowned upon for those outside of his inner circle. This included the possession of property, as laws were passed which limited the ability of a person to acquire and own property. In Libya, “private property rights have not been upheld, and property ownership has been limited to a single dwelling per family, with all other properties confiscated and redistributed.”⁴⁹ Although “modifications to the Estate Property Law in 2004 (legalized) the private ownership of more than one accommodation unit,” in the context of the business environment, the weakness of laws protecting the ownership of private property are extremely problematic as they undermine the confidence of both indigenous potential entrepreneurs as well as foreign investors that the claims to property acquired from the business they build will be legally upheld.⁵⁰ This is a result of the laws made and regulations enforced by the government, and is a critical element impeding the

⁴⁸ Vandewalle, *A History of Modern Libya*, 204.

⁴⁹ Heritage Foundation, (accessed June 14, 2012), <http://www.heritage.org/index/country/libya>.

⁵⁰ Bertelsmann Stiftung, BTI 2010, *Libya Country Report* (Gütersloh: Bertelsmann Stiftung, 2009), 15.

confidence of both businessmen as well as private citizens for whom wealth creation is meaningless, since in many instances they cannot maintain possession of what they acquire.

d. Overall Economic Freedom in Qadhafi's Libya

As discussed in Chapter II, the overall economic freedom metric showed a strong correlation with the Entrepreneurship variable, though the variables contained in the “Open Markets” portion of the Index of Economic Freedom provided more specificity and clarity in this area. Of the three “Open Markets” variables, Libya scored in the 77th percentile of countries in this study in Trade Freedom, but extremely poorly in the other two (Investment Freedom and Financial Freedom) ranking in the 5th percentile in both of these factors. Summarizing the issues responsible for Libya’s performance in these areas, Heritage House explains that, “banks were nationalized decades ago, and the financial sector has been subject to state influence. Limited access to financing has severely impeded any meaningful private business development.”⁵¹ There is significant overlap and interrelation of the variables being examined which this section highlights. The concerns touched upon here are functions of the issues analyzed in the regulatory quality and private property sections, and will be examined in more detail in the analysis of the BTI Organization of the Market and Competition factor later in this chapter.

2. An Examination of Variables Affecting Growth and Stage Advancement

a. Labor Market Freedom and Efficiency in Qadhafi's Libya

Libya had the lowest score of any economy in the study in both of the (quite related) metrics determined to be vital to the growth of an economy in the construct comprising all countries as well as the construct comprised of only countries at a similar stage of development as Libya. Both of these variables involve the legal structure and perceptions of the workforce in a country rather than the percentage of eligible persons employed, which has an obvious (and thus less useful) correlation with

⁵¹ Ibid.

growth. The Labor Freedom variable consists of six different areas including the “ratio of minimum wage to the average value added per worker, hindrance to hiring additional workers, rigidity of hours, difficulty of firing redundant employees, legally mandated notice period, and mandatory severance pay.”⁵² Although Libyan labor laws create a progressive and fair working environment for employees with such protections as limited working hours (8 hours a day maximum, 48 hours a week maximum for women, 6 hours a day maximum for minors), generous mandatory breaks, substantial leave based upon tenure and 3 months of mandatory maternity leave, it also contains clauses that are potentially extremely challenging when considering worker productivity from the standpoint of a firm.⁵³ For example, Labour Law no. 58 of 1970 states that, “in the case of normal sickness, an employee is entitled to 60% of his or her income for a period of one year.” Additionally, an employer cannot terminate a contract with an employee until such a time as an employee’s illness, “prevents him or her from performing his or her duties for a continuous period of not less than 120 days or a total number of 200 days over the course of a year.”⁵⁴ Legal restrictions such as these may be significantly constraining Libyan firms, ultimately retarding growth.

In surveys conducted by the World Economic Forum, the general consensus among Libyan business executives is that pay in their country is largely unrelated to the productivity of the worker, that the relationship between workers and employers is generally uncooperative, that senior positions are most often given based upon relationships rather than merit, and that the best and brightest often leave for opportunities in other countries—evidence of the proverbial “brain drain.”⁵⁵ Regarding governmental policies, respondents suggested that companies had little flexibility in determining the wages they would offer (it was determined through government processes) and the ability of companies to hire and fire workers based upon performance

⁵² Heritage Foundation, <http://www.heritage.org/index/labor-freedom> (accessed May 30, 2012).

⁵³ Eversheds and Mukhtar, Kelbash and Elgharabli, “Employment Law for Libyan and Foreign Employees,” in *Doing Business in Libya*, ed. Jonathan Wallace and Marat Terterov (London: Kogan Page, 2002), 72–73.

⁵⁴ Ibid.

⁵⁵ *The Global Competitiveness Report 2010–2011* (Geneva: World Economic Forum, 2010), 444–451.

was significantly impeded by regulations. Indeed, Libya performed extraordinarily poorly in every aspect of the labor market metric, with percentile scores ranging from <1% (i.e., lowest of all countries) to the 16th percentile among all countries measured.⁵⁶ This omnipresent underperformance precludes the analysis from further specificity, though it is still possible to provide policy recommendations more definitive than, “improve the labor markets.”

Any recommendation that emerges from this analysis must have its genesis in the portions of the market most significantly influenced by government and legal policies. To that end, combatting the cycle of labor market inefficiency begins with altering current legal requirements and norms with respect to hiring and firing practices and wage determination, allowing for corporate competition and flexibility. While this has the potential to hurt the poorest, unskilled workers (thus likely affirming the need for some legal safety net including a minimum wage), it also will have the anticipated effect of increasing worker productivity and improving worker-employer relations.

Theoretically, in addition to enhancing domestic product, this will ultimately increase wages and grow a more educated workforce. As the immediate outcome of increased worker productivity is a rise in corporate profits, corporations will be able to offer improved compensation, which in turn will attract the best and brightest indigenous workers who may have previously looked elsewhere for employment. This may further improve worker productivity, creating the desired virtuous cycle. While this is a somewhat utopian view of the potential effects of labor market reform, it is important to note that this is merely an interpretation of the implications inherent in the empirical data previously derived, rather than a proposition of methods for reform advanced without context.

b. Technological Readiness in Qadhafi's Libya

Technological readiness, when compared to labor markets, is a less complex problem to outline, though no less difficult to correct. It is in large part an effect of Libya's lack of a middle class and widespread poverty. With indicators such as only

⁵⁶ Ibid.

2 broadband internet subscribers per 1000 people in Qadhafi's final year (more recent statistics show this metric having increased to 11 per 1000 people—still an anemic number) and only 5.5 internet users per 100 people in 2009, the lack of technology use by the population is evident. Moreover, estimations of technology absorption by businesses and the availability of the latest technologies to the general population are fairly poor, though these metrics are hovering around the 30th percentile of all countries studied, which is not inconsistent with the performance of Group 2 countries in general.⁵⁷

While government has the ability to provide the necessary infrastructure to make broadband internet and other technologies available throughout the country, improvement in this metric demands a larger percentage of the population have the disposable income required to take advantage of the opportunity. Thus, it is unlikely that substantial improvement in this metric can be achieved without prior economic improvements resulting in a larger middle class with an increased ability to pay for technological conveniences. Progress in this area may be more a secondary consequence of policies that afford increased opportunity for employment at higher wages than an independent prerequisite for improved economic circumstance. Through this logic, technological readiness becomes an indicator that current policies are working, rather than being a source of that success. This is consistent with the results of the statistical analysis, as this variable was found to be a discriminating factor in group classification, but should not be considered to have a causal relationship with growth or development. Therefore, in the construct of this research, it becomes an intermediate, rather than independent variable.

c. Voice and Accountability in Qadhafi's Libya

Of the 102 developing countries included in this study, Libya ranked last in Voice and Accountability as determined through the World Bank Governance Indicators. The metric of Voice and Accountability is defined by the World Bank as an attempt to “capture perceptions of the extent to which a country's citizens are able to

⁵⁷ Numbers in this section were taken from both *The Global Competitiveness Report 2010–2011*, World Economic Forum (Geneva: World Economic Forum), 2010, 464–468, and World Bank Development Indicators (accessed May 31, 2012), <http://data.worldbank.org/indicator/>.

participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.”⁵⁸ It is a fair measure of the “alleged ‘freedom deficit’ that prevent(s) sustained development in the (MENA) region.”⁵⁹ Despite Qadhafi’s purported vision of direct democracy as defined in his Green Book, the Jamahiriya was in large part a farce, as elected officials at every level had little real power. Indeed, the revolutionary leadership (essentially the executive branch led by Qadhafi himself) which was “not elected and (could) not be voted out of office...dictate(d) the decision-making power of the second sector, the “Jamahiriya Sector.”⁶⁰ Moreover, freedom of expression was defined by a government controlled media wherein “any articles critical of current policies (were)...intentionally placed by the revolutionary leadership itself...as a means of initiating reforms.”⁶¹

It is evident that the incoming government of Libya will have an excellent opportunity to improve upon the standard set by the Qadhafi regime in this metric—it is difficult not to improve upon a classification of worst in the world. Yet the relationship between the voice and accountability of a population with the economic development of the country is less evident. There are a multitude of reasons this measure of democracy is positively associated with development, including significant quantitative data demonstrating that democracies utilize their assets more efficiently, enjoy superior anti-corruption policy and maintain a higher level of coordination in policy decision-making than do autocracies.⁶² Methodologically, this variable is similar to technological readiness in that its association with economic group categorization is not proven as causal through the discriminant analysis. However, in this case, the variable being examined is not a measure of a consequence of good economics, but rather a measure of government which might create better economic outcomes. Thus, in the context of this

⁵⁸ The World Bank, World Governance Indicators (accessed May 9, 2012).
<http://info.worldbank.org/governance/wgi/pdf/va.pdf>.

⁵⁹ Henry and Springborg, *Globalization and the Politics of Development*, 67.

⁶⁰ Bertelsmann Stiftung, *BTI 2010 – Libya Country Report*. Gütersloh: Bertelsmann Stiftung, 2009, 6.

⁶¹ *Ibid*, 7.

⁶² *Transformation Index BTI 2012: Political Management in International Comparison*, ed. Bertelsmann Stiftung (Verlag Bertelsmann Stiftung, Gütersloh, 2012), 52.

thesis, the overwhelming control maintained by Qadhafi over all aspects of government (including the economy) is established as a significant cause of the country's vicious economic cycle.

d. Organization of Market and Competition in Qadhafi's Libya

The phenomena being measured by this metric are less obvious from its title than were the previous three. The BTI analyzes the performance of countries in four different areas, the results of which are averaged to arrive at the final rating. These areas are market-based competition, anti-monopoly policy, liberalization of foreign trade and the banking system. Libya scored poorly in three of these categories, with performance in the "liberalization of foreign trade" metric below-average, but significantly better than its results in the other three due to the opening of the economy to foreign investment since the lifting of sanctions in 2003.⁶³

Within the petro-chemical industry, the revolutionary leadership did facilitate a more "free market framework" in the years prior to the Arab Spring. However, "efforts at industrial reform outside the petrochemical sector...yielded little progress." Similar to issues potentially caused by a lack of democracy, bureaucratic inefficiencies and lack of a legal framework caused slow and often counterproductive policy decision-making by the highest levels of government (as Qadhafi was the only person empowered to decree and implement reforms).⁶⁴ Anti-monopoly policy also displayed only minor improvement, with many key industries including oil, aviation and energy production remaining state-owned. The banking system was also defined by a high degree of centralization combined with ineffective attempts at reform during Qadhafi's final years. Although private ownership of financial institutions has been permitted since 1993, regional banks established by local communities were still "subject to the supervision of the Central Bank."⁶⁵ While prior to the Arab Spring, technological

⁶³ Bertelsmann Stiftung, BTI 2012 – *Libya Country Report*, BTI website (accessed June 1, 2012), <http://www.bti-project.org/laendergutachten/mena/lby/2012/#chap7>.

⁶⁴ Ibid.

⁶⁵ Marat Terterov and the Libyan Insurance Company, "Banking and Insurance," in *Doing Business in Libya*, ed. Jonathan Wallace and Marat Terterov (London: Kogan Page, 2002), 34.

support from international organizations was reported to be assisting in the modernization of the banking system, it remains in need of significant improvement.⁶⁶ In general, the financial system in Libya, despite some efforts at reform in recent years, was inefficient, outdated and centrally controlled.

E. CONCLUSION

The statistical methods utilized in this study can only prove correlation, not causation. This mandated the use of logical deductive analysis in conjunction with those statistical techniques to attain the desired results. From the original 46 independent variables analyzed as potential factors for the economic problems endemic to Libya, the computer-based discriminant and factor analyses yielded 13 that were most correlated with either growth, entrepreneurship or group advancement. From these 13 variables, Libya was found to be underperforming in 12. Among those 12, one was determined to have an unclear correlation with positive economic results (HH Fiscal Freedom) and three pairs of two were judged to be independent measures of the same construct (WEF Labor Market Efficiency and HH Labor Freedom, HH Property Rights and BTI Private Property, and WB Control of Corruption and HH Freedom from Corruption). Of the remaining eight (assuming each pair of two as one), four were determined to be causal through qualitative and logical analysis, with three being intermediate variables and one (WEF Technological Readiness), being established as an indicator of the success of more positive economic policies, rather than a cause of the economic vicious cycle for which the Qadhafi regime was responsible. Thus, four causal factors were found to be most responsible for the failures of the Libyan government in creating an environment conducive to economic and human development. Specifically, counter-productive laws creating inefficiencies in the labor market, a lack of voice in government by the populous creating inefficient utilization of assets and encouraging corruption, a regulatory environment constricting ownership of private property and a lack of organization in financial markets inclusive of a banking system that inhibits growth and development effectively serve to diminish the potential of the Libyan economy. Figure 1 displays how

⁶⁶ Bertelsmann Stiftung, BTI 2012 — *Libya Country Report*, BTI website (accessed June 1, 2012), <http://www.bti-project.org/laendergutachten/mena/lby/2012/#chap7>.

these variables interrelate to form a vicious cycle of economic futility that the incoming government must remedy to most effectively improve the inherited economic conditions present within Libya.

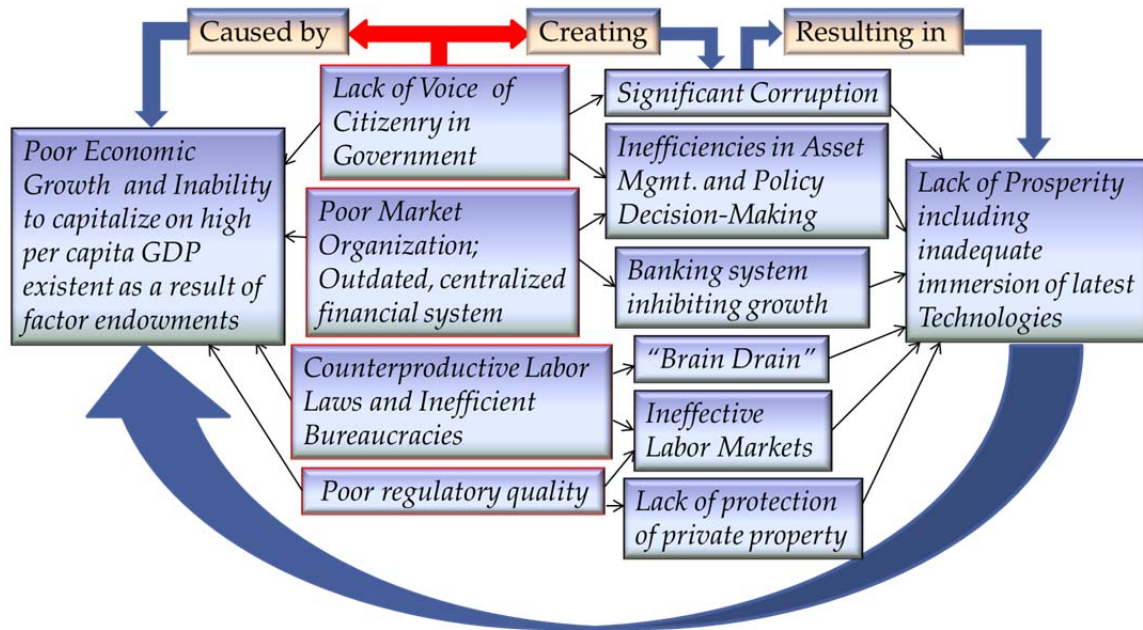


Figure 1. Libya's Vicious Cycle

While potentially unsatisfying due to its complexity, the figure above reflects the conclusions of this chapter. Essentially, although the post-Arab Spring government of Libya will have enormous tasks of organization, legitimization and consolidation of power, their efforts in the realm of creation of economic prosperity should be focused upon the four causal factors identified to effect positive transformation most expediently. Improvement in these key areas will have the anticipated effects of decreasing corruption, improving coordination and effectiveness of policy decision-making, combatting the loss of the brightest minds to foreign competition through an improved labor situation, spurring entrepreneurship by protecting the private property of both firms and individuals, and enabling economic growth through a more modern and effective banking system. The outcomes of these improvements will become manifest through enhanced economic circumstance as measured by such metrics as increased immersion of technology by firms and usage of technology by the populous, as well as other standard

measures of human development. Transforming the economy of Libya in these identified areas will ultimately enable the goal of these policies, which is creation of a virtuous cycle of progressively improved human development for the benefit of all Libyans.

IV. AN ANALYSIS OF CRITICAL ECONOMIC FOCUS AREAS FOR THE INCOMING GOVERNMENT OF TUNISIA

A. INTRODUCTION

The repression of the Tunisian people by the Zine El Abidine Ben Ali had substantial economic, as well as political consequences. Politically, the subjugation of the people through deprivation of freedoms was obvious, the eventual consequence of which was political revolution leading to Ben Ali's removal from power in early 2011. Economically, the manifestations of authoritarianism were more subtle, though no less oppressive to the Tunisian populous. The methods of economic oppression utilized by the Ben Ali regime, though implemented with the likely purpose of obtaining and maintaining power, had consequences detrimental to the Tunisian people, including poverty, a lower-than-expected level of socioeconomic development, high unemployment for the young and well-educated, high adult illiteracy rates and poor regulatory quality. However, these factors are ultimately caused by structural elements endemic to the economic system, of which it is the goal of this paper to identify.

This chapter details the fundamental causes of the economic issues resultant of Ben Ali's version of authoritarianism. Six specific causes are identified as the roots of economic underperformance as a consequence of oppressive policies. These causal factors are a repressive tax system, an inadequate educational structure, a lack of employment opportunity for the young, a state-dominated banking system, pervasive clientelism in business and a lack of civil society traditions. The process through which these elements became established and subsequently interacted in order to produce the desired end-state of political domination—while simultaneously creating a less prosperous Tunisia—will be explored and defined in this chapter.

B. GENERAL ASSESSMENT OF THE BEN ALI REGIME

As initially presented in the analysis of Libya in the previous chapter, one method of elucidating the competency of a state in implementing policy is through a comparison of a country's income to its human development. Although in the case of Tunisia, a

comparison of its Human Development Index (HDI) to GDP fails to distinguish the performance of the Ben Ali government as *maladroit* (as it ranks 96th in income and 94th in HDI out of the 187 countries included in 2011 data, and 93rd in both as reflected in the 2010 publication), a more detailed examination of the numbers may illuminate the government's successes and failures at least to some degree. In many respects, Tunisia was economically successful under the leadership of Ben Ali, even being referred to as the “economic miracle” country of the Middle East in much of the literature of the pre-Arab Spring decade. Even the literature condemning the political repression that undeniably existed maintained a focus upon the contradiction between this style of government and the economic success which Tunisia attained.⁶⁷ Accepting that Tunisia was not an economic failure to the degree of Libya, a nuanced consideration of the various components of human development is required to attain an understanding of pre-Arab Spring condition in Tunisia. Thus, using the Human Development Index (HDI) again as a guide, Tunisia's performance in each component of the Index must be considered. The categories that will be considered, as they are contributing factors to HDI, include metrics representing prevalence of poverty, equality via income distribution, gender equality, and measures of the health and education of the population.

In the Multidimensional Poverty Index, which is a “measure of the percentage of deprivations that the average person would experience if the deprivations of poor households were shared equally across the population,” Tunisia is ranked 24th of the 109 developing countries measured.⁶⁸ In gender equality, again Tunisia excels, ranking ahead of the United States at 45th out of the 146 countries included in the study.⁶⁹ In the HDI's health metric, Tunisia performed in line or possibly even slightly above expectations ranking 70th out of the 194 countries comprising the Health Index. However, Tunisia ranks 81st out of 134 countries in the HDR's version of an inequality

⁶⁷ Beatrice Hibou and John Hulsey, “Domination & Control in Tunisia: Economic Levers for the Exercise of Authoritarian Power,” *Review of African Political Economy* 33, no. 108, (June, 2006): 187.

⁶⁸ 47 of the 60 countries that rank highest in Human Development were omitted from this study, presumably because poverty is not as significant of a problem in these states. This should be noted when considering Tunisia's surprisingly high ranking in this metric. Human Development Indicators, (accessed July 15, 2012), <http://hdr.undp.org/en/data/build/>.

⁶⁹ Ibid.

index called Inequality Adjusted HDI, in which the basic dimensions forming the HDI are adjusted for inequalities.⁷⁰ Its performance was also fairly poor in education, ranking 110th out of 188 in the Education Index.⁷¹ Thus, while overall Tunisia's ranking in human development is in line with the expectations created by its GDP, inequality and education are two areas in which the country underperformed during the last years of the Ben Ali regime. As will be analyzed further in Section D, these areas are also identified as contributing factors to the vicious cycle the conclusions of this chapter detail.

C. IDENTIFICATION OF SPECIFIC AREAS INHIBITING TUNISIA'S ECONOMIC SUCCESS

The analysis performed in Chapter II advances results that identify variables correlated to growth, entrepreneurship and group advancement for Group 3 countries, including Tunisia. These correlations are suggestive of potential causes of poorer-than-optimal economic performance experienced by the Tunisian people during the Ben Ali regime. In order to determine which of these identified potential causes of underperformance determined to be most relevant to Group 3 countries are applicable to the particular case of Tunisia, the performance of the country in each potential factor is herein examined. The variables most relevant to countries at approximately the same stage of development as Tunisia in which Tunisia is shown to have underperformed will be considered areas wherein improvement by the incoming regime is most necessary. These identified areas will be analyzed in further detail to find a logical construct of the vicious economic cycle experienced by Tunisia (though to a far less obvious extent than the previous example of Libya) during the Ben Ali era.

As with Group 2 countries such as Libya, the factors most associated with economic growth for Group 3 countries are measures of the condition of the labor markets within those states. As shown in Table 14, Tunisia's performance in both the WEF's Labor Market Efficiency factor and HH's Labor Freedom variable is in-line with

⁷⁰ Ibid.

⁷¹ The sustainability metric, though important, has a negative correlation with development, and is therefore omitted from this summary of results. Data taken from HDR website (accessed July 17, 2012), <http://hdr.undp.org/en/data/build/>.

expectations for Group 3 countries as defined by the mean performance of the group, though its performance is poorer than the mean of Group 4 countries, particularly in the WEF variable calculation. Moreover, Tunisia's performance in both is significantly higher than the mean of regional comparators. As discussed in Chapter III, both of these variables show a positive correlation with group advancement, though WEF Labor Market Efficiency does show a small decline in performance from countries identified as Group 1 to those identified as Group 2. This suggests that while the condition of Tunisia's labor markets requires improvement in the future to perform at a level consistent with more economically advanced countries, it is not likely that labor markets were a causal factor inhibiting the Tunisian economy prior to the Arab Spring revolution.

Table 14. Tunisia's Performance in Key Growth Metrics

Variables Associated with Growth for All Groups and Group 3 only

Metric	Tunisia	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean	MENA Mean
<i>Percentile Rank among sample of 102 developing countries in Parenthesis</i>						
WEF Labor Market Efficiency	4.26 (51.0%)	4.17 (37.3%)	4.07 (32.4%)	4.25 (48.0%)	4.61 (77.5%)	4.01 (29.4%)
HH Labor Freedom	65.7 (61.8%)	57.1 (45.1%)	57.5 (46.1%)	64.2 (59.8%)	66.4 (63.7%)	60.6 (52.0%)

*Percentile ranks of mean values are approximations based upon the rank of the country's score the mean most closely equates to.

Source: Author's calculations based upon data from World Economic Forum (WEF) Global Competitiveness Report 2010-2011 and Heritage House Economic Freedom Scores 2011 (HH).

Of the 11 variables found to have at least a secondary association with entrepreneurial environment in the factor analyses performed for Group 3 countries as well as that performed for all countries, Tunisia actually outperformed expectations based upon group mean in 10. In fact, Tunisia's performance was in line with even more economically mature Group 4 countries in 6 of the 11 factors. The WB's Regulatory Quality indicator of good governance was the only metric in which Tunisia's evaluation

was below the Group 3 mean, and even it was only slightly so. However, principally because of its unique position as the singular factor in which Tunisia's performance was questionable, regulatory quality as defined by the World Bank is identified as an area requiring improvement by the incoming government of Tunisia.

The discriminant analysis conducted in Chapter II concluded that five variables were most able to classify countries into their proper grouping when all countries were considered or when only Group 3 and Group 4 countries were included in the analysis. Of these five factors, Tunisia performed better than the Group 3 mean in two (WEF Technological Readiness and WB Rule of Law) and underperformed in the other three. Most significantly, Tunisia's performance in the WB Voice and Accountability metric was found to be inferior to even Group 1 and 2 means, as evidenced in Table 16. In the two other factors in which Tunisia's performance was weak (BTI Management Level of Difficulty and BTI Level of Socioeconomic Development), it performed in line with Group 2 countries, but well below expectations as determined by the mean of its Group 3 comparators. Thus, these three variables, as well as WB Regulatory Quality as described in the previous paragraph, will be considered as causes of Tunisia's economic concerns, and are the areas this analysis suggests will most readily effect positive change if properly reformed by the new government of Tunisia.

Table 15. Tunisia's Performance in Key Entrepreneurship Metrics

Variables Associated with Entrepreneurship for All Groups and Group 3 only

Metric	Tunisia	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean	MENA Mean
<i>Percentile Rank among sample of 102 developing countries in Parenthesis*</i>						
WB Regulatory Quality	-0.0154 (57.8%)	-0.5437 (25.5%)	-0.3505 (36.3%)	0.1514 (61.8%)	0.9611 (92.2%)	-0.1227 (51.0%)
WEF Institutions	5.19 (94.1%)	3.48 (40.2%)	3.83 (59.8%)	3.82 (59.8%)	4.55 (84.3%)	4.42 (82.4%)
WEF Goods Market Efficiency	4.68 (89.2%)	3.77 (28.4%)	3.97 (46.1%)	4.12 (58.8%)	4.61 (88.2%)	4.36 (79.4%)
HH Property Rights	50 (77.5%)	29.57 (21.8%)	34.09 (45.5%)	39.11 (53.5%)	64.06 (91.1%)	41.56 (63.7%)
WB Government Effectiveness	0.1943 (76.5%)	-0.6579 (25.5%)	-0.3494 (45.1%)	0.0060 (63.7%)	0.9464 (92.2%)	-0.0155 (61.8%)
WB Control of Corruption	-0.1311 (68.6%)	-0.7010 (33.3%)	-0.4892 (45.1%)	-0.2310 (61.8%)	0.6968 (91.2%)	-0.1061 (68.6%)
HH Freedom from Corruption	42 (74.5%)	26.46 (29.7%)	31.36 (48.5%)	37.14 (64.4%)	57.81 (93.1%)	40.25 (72.3%)
WEF Business Sophistication	4.34 (86.3%)	3.38 (30.4%)	3.69 (52.0%)	3.92 (65.7%)	4.31 (83.3%)	4.04 (70.6%)
WEF Innovation	3.85 (91.2%)	2.82 (35.3%)	2.96 (49.0%)	3.10 (63.7%)	3.76 (90.2%)	3.19 (69.6%)
HH Business Freedom	80.2 (87.1%)	55.21 (24.8%)	64.83 (51.5%)	67.16 (56.4%)	75.58 (82.2%)	66.38 (55.4%)
WEF Macro-Economic Environment	5.09 (80.4%)	3.98 (24.5%)	4.51 (52.0%)	4.69 (61.8%)	5.10 (80.4%)	4.98 (75.5%)

*Percentile ranks of mean values are approximations based upon the rank of the country's score the mean most closely equates to.

Source: Author's calculations based upon data from World Economic Forum (WEF) Global Competitiveness Report 2010-2011, World Bank Governance Indicators 2010 (WB), and Heritage House Economic Freedom Scores 2011 (HH).

Table 16. Tunisia's Performance in Key Advancement Metrics

Significant Variables in Classifying All Groups and in Classifying Group 3 vs. 4

Metric	Tunisia	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean	MENA Mean
<i>Percentile Rank among sample of 102 developing countries in Parenthesis*</i>						
BTI Management Level of Difficulty**	5.1 (51.0%)	3.21 (17.6%)	5.05 (50.0%)	5.92 (64.7%)	7.80 (82.2%)	5.25 (52.0%)
WEF Technological Readiness	3.86 (78.4%)	2.83 (19.6%)	3.32 (47.1%)	3.64 (69.6%)	4.53 (92.2%)	3.71 (70.5%)
WB Voice and Accountability	-1.345 (8.8%)	-0.536 (35.3%)	-0.781 (32.4%)	-0.043 (63.7%)	0.499 (85.3%)	-1.11 (15.7%)
WB Rule of Law	0.1126 (75.5%)	-0.7318 (32.4%)	-0.4673 (46.1%)	-0.2128 (59.8%)	0.8472 (92.2%)	-0.0387 (70.6%)
BTI Level of Socioeconomic Development	5.0 (47.1%)	2.83 (12.7%)	4.86 (45.1%)	5.57 (57.8%)	8.19 (90.2%)	5.31 (54.9%)

*Percentile ranks of mean values are approximations based upon the rank of the country's score the mean most closely equates to.

**For consistency, this metric has been rescaled to reflect higher scores equating to less difficulty (the more desirable environment).

Source: Author's calculations based upon data from Bertelsmann Transformation Index 2012 (BTI), World Economic Forum (WEF) Global Competitiveness Report 2010-2011 and World Bank Governance Indicators 2010 (WB).

D. ANALYSIS OF BEN ALI'S REGIME PERFORMANCE IN KEY AREAS

The four variables that have been empirically identified as the most likely candidates for Tunisia's lack of economic advancement prior to the Arab Spring will be considered in more detail in this section. Application of the statistical methods and conclusions of Chapter II have led to the reduction in potential causes of economic ineptitude from the original 46 possibilities to these four. While there is little doubt that improvement in other areas outside of those to be examined will be required in order for positive change in economic circumstance to most fully be realized by the citizens of Tunisia, the rigorous methodology implemented herein suggests that these four factors should be the top priorities addressed by Tunisia's incoming government. The condition of each of these factors in pre-revolution Tunisia will be summarized, and a judgment on

the extent to which each was causal will be made. Ultimately, similar to the exercise conducted for Libya in Chapter III, a logical construct representing a simplification of the factors that have created the economic vicious cycle existent in Tunisia will be illustrated via this procedure.

1. Quality of Regulation in Ben Ali's Tunisia

The World Bank's Regulatory Quality variable is an attempt to capture "perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development."⁷² It utilizes portions of 14 different data sets (including the three others used in their entirety in this study) to produce an assessment of the condition in a country of such concepts as fairness of competition, burdensomeness of administrative regulations, effectiveness of anti-monopoly policy, fairness of taxes and tariffs, status of foreign investment and banking, and ease of market entry for new firms.⁷³ It is therefore logical that it would be highly correlated with the entrepreneurship variable in this study.

The Ben Ali regime performed inadequately in this metric due to several structural issues that are in large part consequences of maintaining a highly centralized, authoritarian government. Of the aforementioned factors contributing to this variable, the literature suggests the areas most consequential to Tunisia's overall poor performance in this metric are the status of the banking system, the lack of fairness and arbitrariness in application of the tax system and the lack of fairness of competition as a result of clientelism. Empirically-based analyses of the financial regulatory system in Tunisia have concluded that, despite improvements in monetary policy during the Ben Ali years, "in the long and short terms, financial repression has had significant and negative effects on financial development" in Tunisia.⁷⁴ Exacerbating the difficulties resultant from repression of financial institutions was the perversely symbiotic relationship between

⁷² The World Bank, World Bank Governance Indicators (accessed July 15, 2012), <http://info.worldbank.org/governance/wgi/pdf/rq.pdf>.

⁷³ Ibid.

⁷⁴ Nejib Hachicha, "Banking Sector Controls and Financial Deepening: A Structural Error Correction Model for Tunisia," *The Developing Economies* 43, no. 2 (2005): 265.

government and banking institutions. Specifically, over 20% of Tunisia's loans were non-performing in 2007, and the same public banks were bailed out by the government successively over the years. This was necessary (or at least understandable) when considering over 40% of bank assets in Tunisia were state owned, thus creating the almost mandatory requirement to ensure these banks did not fail, despite their lack of discipline.⁷⁵ The derogatory effects of this arrangement have been palpable, as "management contracts and other reforms of their corporate governance have not solved the fundamental moral hazard underlying state ownership."⁷⁶

Taxation is discussed in the following section, as it also represents a manifestation of the control the Ben Ali regime required that resulted in the complete lack of voice permitted to the populous. Regarding fairness of competition, there was a lack of free and fair competition in the Tunisian markets during the Ben Ali era that affected the overall economy negatively. Macroeconomic policy structures stunted Tunisia's potential for improved economic advancement as a result. Despite reforms in regulation including improving openness of trade through reduction of tariffs, Tunisia's macro-economic policy late in the Ben Ali years was well below the MENA average, outpacing only that of Lebanon, Yemen and Egypt.⁷⁷ A significant portion of this lack of success in macroeconomic policy was due to the requirements incumbent upon policy-makers in a clientelist system wherein competition was neither free nor fair. As will be more completely explained in the management level of difficulty section, groups and associations in Tunisia are extensions of the state apparatus which undermine the development of civil society while reinforcing clientelist dependencies. Indeed, Tunisian "business associations are little more than vehicles for conveying state policy to the private sector."⁷⁸ Thus, business was unable to mobilize and create organizational

⁷⁵ Ibid.

⁷⁶ Najy Benhassine, *From Privilege to Competition: Unlocking Private-Led Growth in the Middle East and North Africa* (Washington, D.C.: World Bank, 2009), 119.

⁷⁷ Ibid, 81–82.

⁷⁸ Melanie Cammet, "Business–Government Relations and Industrial Change: The Politics of Upgrading in Morocco and Tunisia," *World Development* 35, no. 11 (November, 2007), 1897.

structures aimed at protecting their interests, and rather were forced to rely upon the strength of their relationship to government to produce a favorable environment for a particular industry.

2. Voice and Accountability in Ben Ali's Tunisia

The most dramatic area of underperformance in Tunisia as indicated by quantitative measures of factors linked to economic advancement was the World Bank's measure of a population's voice in its government and the accountability that government has to the population. Common sense would suggest that this failure was not only a factor integral to Tunisia's lack of economic success, but was also to a large degree responsible for the revolution which ended the Ben Ali regime's control of the country in 2010–11. Tunisia scored in the bottom 10% of all countries in the study in this metric, implying that the citizens of Tunisia had very little freedom of expression, freedom of association or ability to choose their own government, and that the media was unable to report impartially on matters involving the government without fear of reprisal.⁷⁹ Although explaining an important measure of governance that exposes the severe lack of democracy present within the authoritarian state headed by Ben Ali, it is the purpose of this paper to identify areas wherein improvement will create economic growth and advancement. Therefore, this measure of governance will be analyzed through a prism focused upon the economy, rather than on the quality of government structures and policies the metric ostensibly provides.

There is substantial evidence that this lack of voice was closely tied to the economic structure of the country during the Ben Ali era. Economic means were used extensively to maintain control over business, and by extension the population as a whole. Specifically, control of the population was implemented through "everyday economic mechanisms such as in the tax system, solidarity practices and the industrial mise a niveau. These practices serve(d) both to advance the 'economic miracle' and

⁷⁹ These areas are the components the World Bank's Voice and Accountability metric attempt to measure, as provided at World Bank Governance Indicators (accessed July 15, 2012), <http://info.worldbank.org/governance/wgi/pdf/va.pdf>.

simultaneously function(ed) as techniques of coercion and repression.”⁸⁰ The *mise a niveau* was essentially forced upon entrepreneurs as a program that should be supported as a ‘civic gesture.’ While the international competition that entrepreneurs were forced to endure became methods of exercising control by the regime, this was made possible by the subsidies and advantages sought out and expected by the entrepreneurial class as a result of the traditional clientelist system dominant in Tunisia.⁸¹ Both regarding and independent from the *mise a niveau*, businessmen viewed “the constraints placed on private enterprise by the political system as the ‘price’ to be paid for...benefits...(including) social peace and geopolitical stability as well as market protectionism, fiscal exoneration, and administrative exemptions.”⁸²

Another of the constraints upon private enterprise involved an arbitrarily enforced tax system largely viewed as unfair within the country. The tax system in Tunisia could be considered a method through which control was exerted, as the granting of fiscal amnesty was used to placate the business community and reconcile the executive of the government with business. While these concerns with taxation were applicable to individuals as well as corporations, in many respects these aspects of repression were particularly applicable to the business community, wherein enforced taxation was conversely “perceived as an instrument of punishment.”⁸³ Thus the tax system, as well as other methods of economic repression was a manifestation of a patently authoritarian system of governance in which the citizenry had a complete lack of voice. These are some of the most significant examples of the system of economic repression used by Ben Ali both to ensure his domination of the country continued as well as to promote the illusion of the Tunisian “economic miracle.”

⁸⁰ Hibou, “Domination & Control,” 185. The “industrial *mise a niveau*” refers to a World Bank and EU financed program implemented in 1996 designed to bring emerging industries up to standard for international competition.

⁸¹ Ibid., 193–194.

⁸² Ibid., 189.

⁸³ Ibid., 191.

3. Management Level of Difficulty in Ben Ali's Tunisia

The phenomena being measured by the BTI's Management Level of Difficulty metric is less obvious than many of the other variables in this study based upon its title. There are evaluations of five separate factors that are averaged to determine the ultimate value of the metric for each country. The first of these factors involves manifestations of structural constraints present within a society such as extensive poverty, inadequate infrastructure and insufficient economic diversification. Other, more transparent, factors contributing to this metric are empirical analyses of the strength of civil society traditions present within a country, the intensity of any conflict within the country, a rescaled measure of purchasing power parity (PPP) GNI per capita, a rescaled measurement of the UN Education Index and an average of the BTI's Stateness and Rule of Law scores.⁸⁴ As previously discussed, Tunisia scores relatively well in several of these areas (as indicated by data from both the BTI and other sources), which necessitated the execution of an examination of each factor independently to determine the area of underperformance with more specificity.

The indicator most lacking of those comprising this factor of the BTI was, in the case of Tunisia, the portion labeled "civil society traditions."⁸⁵ There is a lack of civil society in Tunisia which, though typical of MENA countries, is a limiting factor in both the creation of a liberal democracy as well as the construction of the successful economic structures which consensus suggests is able to develop more readily in such an environment. Consider the supposition that "in Tunisia...non-governmental organizations are actually governmental. Similarly, the private sector is still highly dependent on the state for public interventions. Private intermediaries base their power on their proximity to the highest function, which is, of course, public."⁸⁶ This revelation of Tunisian societal structure underscores the control the Ben Ali exerted over the population. His regime ultimately ensured—to the greatest degree possible—that all

⁸⁴ Numbers taken from BTI 2012 data set.

⁸⁵ BTI 2012 data rates this portion of the variable a "7" on a 1–10 scale, with all other contributing factors to the variable (other than the education index which is discussed in more detail in Section B of this chapter) being rated "5" or below (a lower score being more desirable in this particular metric).

⁸⁶ Hibou, "Domination and Control," 197.

associations of persons were purview to governmental control, thereby retarding the development of healthy civil society structures and traditions. Thus, the “management level of difficulty” metric as defined by the BTI is in this sense highly related to the WB’s “voice and accountability” variable, enhancing the logical connections between factors in the results of this analysis.

4. Level of Socioeconomic Development in Ben Ali’s Tunisia

Although superior to most comparator countries in the region, Tunisia’s level of socio-economic development is poor in several areas of particular significance. The level of Tunisia’s socioeconomic development as discussed in the BTI is largely analogous to and based upon the HDI, which was discussed in Section B of this chapter. Yet the BTI’s exploration of the data, in conjunction with other data sources, provides further elucidation to the analysis previously presented. The BTI concludes that “Tunisia fares relatively poorly in terms of human poverty when compared to medium-developed countries in general, primarily due to its relatively high rate of adult illiteracy (23.1%).”⁸⁷ This confirms the assertion presented in Section B that education is a cause of the economic problems present in Tunisia. This high level of poverty as a consequence of a relatively uneducated populous, as well as the observation by the BTI that the unemployment rate for young (20–24 year olds) and well-educated individuals was three times that of men over 40, not only defines areas in which improvement is required to create a higher level of human development, but also proved to be a source of the political upheaval that became manifest after the publication of the BTI report.

However, performance in this area—due to its dependence upon basic statistical data that are consequences of the structures and policies existent in a country—can reasonably be considered an intermediate variable in this study. The particular facets of the variable that contributed to Tunisia’s weakness in the metric as a whole (in particular the aforementioned educational and employment metrics) are likely more causal than the measurement of this factor when considered in its entirety. The evidence for this

⁸⁷ Information taken from Bertelsmann Stiftung, BTI 2010 — *Tunisia Country Report*. Gütersloh: Bertelsmann Stiftung, 2009, 12, and is mirrored in the 2012 report, though adult illiteracy is estimated at 22% in that publication.

assertion is more an evaluation founded in common sense than an empirically-based conclusion consistent with the previous portions of the study. While to some degree every independent variable used in the study is based on more foundational data, this metric in particular seems a measure of outcomes rather than a representation of a cause. It will therefore be presented as such in the construction of the vicious cycle delineated in the following section.

E. CONCLUSION

The failings of the Ben Ali regime, even when considered from an economic perspective, appear to be more a consequence of the authoritarian governmental structure existent in Tunisia than poorly constructed or implemented economic policy. Outside of the financial system and tax policy, the identified focus areas are less economic in nature and more societal structures founded in both tradition and authoritarian rule.⁸⁸ This creates the potential for dramatic change to be realized with the ousting of the government, as the economic skeleton present in Tunisia is relatively healthy, outside of the directly and purposefully repressive measures identified in this chapter. Consistent with the intent of this analysis, each analyzed area was found to have more fundamental causes, the specificity of which provides useful results for the incoming government. The combination of specific identified causes when considered with the intentionality of their implementation suggests that improvement can possibly become manifest merely through execution of policies that allow natural development through non-interference.

⁸⁸ The weakness of the financial system and tax policy could be considered resultant of economic policy, though a reasonable argument could be made that they too were a result of the requirement to maintain tacit control of the population, as opposed to being due to a poor understanding of the macroeconomic consequences of their implementation.

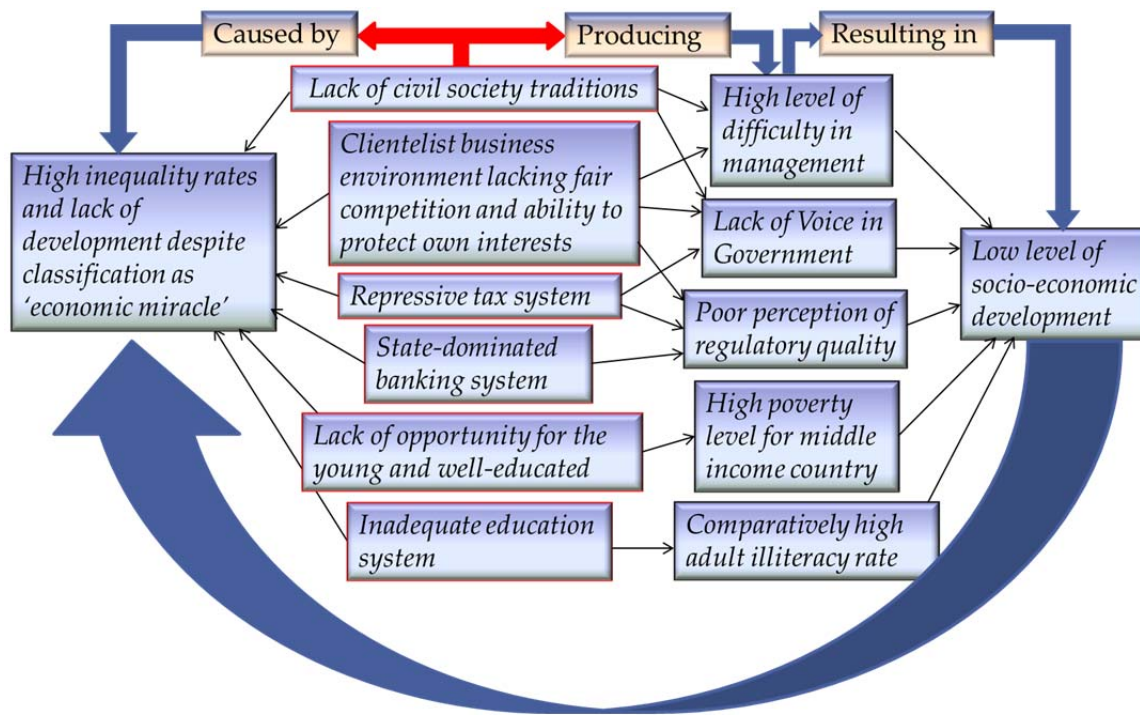


Figure 2. Tunisia's Vicious Cycle

The analysis of key areas in this chapter exhibited a surprising amount of overlap and common causal factors of metrics whose titles displayed little similarity. Six factors were found to be fundamental causes inhibiting the economic advancement of Tunisia, and three of those helped to produce multiple intermediate effects. Three variables from utilized datasets that were determined to be correlated with entrepreneurial environment or stage advancement in which Tunisia underperformed were identified as intermediate variables, with one (level of socioeconomic advancement) essentially a measure of outcomes. Thus, the six causal elements are more specific and defined than was the case in Libya, where the multitude of problems precluded realization of such specificity, which is the ultimate goal of this study. A repressive system in which taxes were used both as a method of repression and an instrument of control, a poor education system that creates an adult population with a high rate of illiteracy, a lack of opportunity for the young and well-educated disproportionate to older members of society exacerbating poverty and a state-led banking system resulting in perverse incentives and a lack of discipline are all both root causes of economic underperformance and methods of

maintaining authoritarian domination. The final two causes—the prevalence of clientelism in business and lack of civil society traditions—are related in that business associations are a significant aspect of civil society, and again, governmental control of these areas ensured the voice of the population was suppressed, while simultaneously preventing Tunisia from realizing its economic potential.

Figure 2 is a representation of the cycle of economic ineptitude that was in large part a product of political repression. Improved policy creation, execution and enforcement by the incoming government of Tunisia in the areas identified as causal is herein determined to provide the path best able to realize economic advancement. However, even a retreat from the repressive policies of Ben Ali toward less intrusive, if not optimal policies will likely have significant positive consequences. This will allow the diverse, and in many areas healthy, economy of Tunisia to flourish, and may lend credence to the recent myth of Tunisia's status as an 'economic miracle.'

V. AN ANALYSIS OF CRITICAL ECONOMIC FOCUS AREAS FOR THE INCOMING GOVERNMENT OF EGYPT

A. INTRODUCTION

Each country's Arab Spring experience has been unique. While Tunisia experienced a revolution that resulted in a relatively peaceful transition from authoritarian rule, Libya's revolution required armed conflict inclusive of international intervention to ultimately oust the incumbent regime. Distinct from either of these was the Arab Spring experience of Egypt, which was not, in the strictest sense, a revolution at all. The revolutionary element of popular uprising as manifested through mass protest proved insufficient to create a change in regime. Rather, this revolutionary environment required the additional ingredient of the military's abandonment of the regime of Hosni Mubarak to achieve the objectives of the revolutionaries. This confluence of revolution and coup d'état has been coined as a "coupvolution," an increasingly popular term reflecting both aspects of the expression of the Arab Spring unique to Egypt.

Egypt's coupvolution was the consequence of a multitude of issues and grievances—political, economic and otherwise—many of which stemmed from a complicated historical political environment that is far beyond the scope of this paper. Egypt's polity is a topic of enormous depth and complexity, making the task of generating vital economic focus areas daunting without the structure the methodology employed herein provides. Though the process through which results are obtained undeniably simplifies an extremely complicated amalgamation of challenges, it has the advantage of relying upon quantitative data rather than qualitative analyses. This reliance enables innumerable potential variables to be reduced to the few that are analyzed as potential critical areas, and facilitates the transition of an extremely difficult task into one more manageable.

The analysis of this chapter produced three areas in which improvement will most substantially effect positive economic change. As with Libya and Tunisia, the insufficient political voice afforded the population, and a lack of accountability to the population by the Egyptian government is identified as an area of underperformance that

must be improved to engender an improved economy. Egyptian labor markets are also found to be a critical area of weakness, with poorly-conceived laws and an inefficient bureaucracy in part responsible for creating an environment in which the informal or “shadow” economy is often perceived as preferable to the formal by executives of Egyptian firms. Finally, endemic corruption that was poorly controlled and often sanctioned by the Mubarak government retarded firm creation by potential entrepreneurs, and was regarded as the most significant obstacle to doing business by practicing businessmen within the country. These areas, the process by which they were identified, and the vicious cycle of economic futility they helped to create in Egypt will be explored in this chapter.

B. GENERAL ASSESSMENT OF THE MUBARAK REGIME

During the years since Egypt attained independence in 1952, the condition of the economy has oscillated greatly (though around a rather low baseline) due to many factors including hydrocarbon prices, international political alliances, economic policy decisions and internal attempts to broaden public appeal through both economic and political liberalization.⁸⁹ Egypt is in large part a rentier economy wherein substantial percentages of income are not only a result of hydrocarbon resources and labor remittances, but also are products of Suez Canal rents and tourism monies stemming from the rich ancient history of the country. Thus, the leadership of Egypt must manage the difficult proposition of balancing the benefits of its unique circumstances and resources (i.e., availability of sources of income to the populous which otherwise would not be) with the economic difficulties these sources of income often cause the state (i.e. inability to tax effectively and lack of significant required infrastructure to maintain, inhibiting potential job growth). This difficult economic situation was often exacerbated by the repressive policies of Hosni Mubarak, whose only efforts at economic liberalization were attempts “to retain political power in the face of a deteriorating economy,” particularly during periods of falling energy prices and worldwide recession causing reductions in foreign

⁸⁹ See Henry and Springborg, *Globalization and the Politics of Development*, 162–197, for in-depth explanation of how some of these methods affected the Egyptian economy in disparate ways.

aid.⁹⁰ However, in the decade prior to the coup/volution, economic reforms (often championed by Hosni Mubarak's son, Gamal) were sporadically undertaken with varying degrees of success. These policies may or may not have been planned to be accompanied by or precursors to political liberalization; though were that the intent it proved ineffective, as promised political reforms during Mubarak campaigns were generally reneged upon following an election.⁹¹

Table 17. Egypt's Economic Performance vs. "Expected"

Overall Human Development compared to Expectation from income

Country	Human Development Rank (2010)	GDP per capita in PPP terms (2007)*	GNI per capita in PPP terms (2010)	Difference in per capita GNI and HDI Rank
<i>Percentile Rank in Parenthesis</i>				
Egypt	113 out of 187 (39.6%)	101 out of 178 (43.3%)	103 out of 187 (44.9%)	-10 (-5.4%)

*2007 data used due to lack of data availability in more recent years.

Source: International Human Development Indicators, 2011.
<http://hdrstats.undp.org/en/indicators/100106.html>

Maintaining the structure of previous chapters, the standard for measuring the success or failure of the Mubarak regime is, in the context of this work, determined through a comparison of its wealth as measured by per capita GNI/GDP to the average conditions in which the population exists, as derived from HDI. Despite the obvious inadequacies of the Mubarak regime in terms of the political atmosphere he created and maintained within Egypt, a less qualitative determination of his regime's performance is helpful in enhancing the quantitative foundation of this work. Table 17 summarizes the relationship between Egypt's wealth and the conditions which dictate the quality of human life, with Egypt performing lower in human development metrics than might be

⁹⁰ Ibid., 190.

⁹¹ Ibid., 191.

expected based upon its per capita income. Thus, the suggestion of the quantitative evidence affirms that of the qualitative: the Mubarak regime managed the Egyptian economy ineffectively.

The complexities of the Egyptian economy create a challenging environment within which the incoming government must work. There are countless policies and decisions that, upon being implemented, will have both positive and negative effects on various portions of the population, and will be more or less effective depending upon other policies that may augment or undermine the effectiveness of the first. This complexity is understood and appreciated, despite the techniques of reduction and extraction utilized in this work. Indeed, it is because of the realization of the enormity of the task being undertaken by the post-Arab Spring government of Egypt that there is utility in the results found through the techniques executed herein. The nearly limitless number of issues and structures that are pertinent to economic success likely preclude the government from effectively addressing them all simultaneously. It is therefore the purpose of this paper to determine upon which areas the government should focus in order to realize positive economic transformation most efficiently. Although not an end unto themselves, the following sections may offer—if nothing more—a place to begin to repair the patently unsuccessful management of the economy for which the Hosni Mubarak regime was responsible.

C. IDENTIFICATION OF SPECIFIC AREAS INHIBITING EGYPT'S ECONOMIC SUCCESS

Egypt, like Libya, has been determined by the World Economic Forum to fit within the parameters of Group 2 countries, or those in transition from having economies that are primarily factor-driven, to economies that are driven by efficiency.⁹² Thus, consistent with the analysis of previous chapters, the performance of Egypt in factors identified as key for growth, entrepreneurship and group advancement for Group 2 countries will be examined in this section to determine areas in which improvement is most likely to produce significant results. As with the analyses of Libya and Tunisia, all

⁹² World Economic Forum, “*The Global Competitiveness Report*,” 2010–2011, 9–11.

independent variables determined as key to each dependent variable will be analyzed successively, beginning with those variables found through factor analysis to be most highly correlated with growth.

For Group 2 countries, the factor analyses summarized in Chapter II found only two independent variables to be correlated with economic growth to any degree of statistical significance. In both the analysis conducted inclusive of all countries as well as that which included only Group 2 economies, WEF Labor Market Efficiency and HH Labor Freedom were found to be the only independent variables highly correlated with economic growth. As shown in Table 18, Egypt's performance late in the Mubarak era was significantly poorer than the mean of both Group 2 and MENA countries. Moreover, even Group 1 countries displayed a higher mean value in these variables than Egypt. Thus, a lack of freedom and efficiency in labor markets is identified as an area of underperformance in Egypt that has significantly constrained its growth in recent years. The details of this underperformance and how it has constrained growth will be explored in Section D.

Table 18. Egypt's Performance in Key Growth Metrics

Variables Associated with Growth for All Groups and Group 2 only

Metric	Egypt	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean	MENA Mean
<i>Percentile Rank among sample of 102 developing countries in Parenthesis*</i>						
WEF Labor Market Efficiency	3.43 (6.9%)	4.17 (37.3%)	4.07 (32.4%)	4.25 (48.0%)	4.61 (77.5%)	4.01 (29.4%)
HH Labor Freedom	53.6 (35.6%)	57.1 (45.1%)	57.5 (46.1%)	64.2 (59.8%)	66.4 (63.7%)	60.6 (52.0%)

*Percentile ranks of mean values are approximations based upon the rank of the country's score the mean most closely equates to.

Source: Author's calculations based upon data from World Economic Forum (WEF) Global Competitiveness Report 2010-2011 and Heritage House Economic Freedom Scores 2011 (HH).

Regarding metrics associated with creation of a positive entrepreneurial environment, more complex linkages were observed in the factor analyses. As explained in previous chapters, the number of factors displaying a statistically significant correlation with entrepreneurship (whether primary or secondary) precludes them from inclusion in this analysis in their entirety. Rather, HH Overall Freedom will be used as a proxy for the numerous measures of economic freedom that exhibited a correlation, and will be considered as a potential key area along with several other factors that were found to display linkages in multiple models. The results of the analysis of Egypt's performance in these variables are summarized in Table 19. They are both logically consistent and very useful in the context of this study, as only two (quite related) variables were found to be potential causes of the poor entrepreneurial environment existent in Egypt. Contrast this to Libya, wherein underperformance in virtually every area diminished the value of the results, as the purpose is to reduce the number of areas upon which the incoming government should focus to the few deemed most vital. Egypt's performance in WB Regulatory Quality, BTI Private Property and HH Overall Freedom were in line with or slightly above expectations, with its measures lying between the mean performance of Group 2 and Group 3 economies. In HH Property Rights, the value assigned to Egypt's performance was higher than even the mean of Group 3 countries, making it an area of outperformance with respect to expectations.⁹³ However, in measures of both the prevalence of and acumen of the government in combatting corruption, Egypt scored below the Group 2 mean score, and significantly below the mean of MENA competitor nations. It is therefore corruption which will be

⁹³ This suggested outperformance is based upon the quantitative results derived in this study. There is substantial evidence that lack of property rights and ineffective legal protections to property owners creates serious concerns for potential entrepreneurs. In "Egypt's Economic Apartheid," *The Wall Street Journal*, February 3, 2011, Hernando DeSoto states that "92% of all Egyptians hold their property without normal legal title." Moreover, on average potential owners must negotiate through 10 years of red tape to get legal title to a vacant piece of property. This causes substantial disincentives for those attempting to begin businesses that risk interference from government beyond the norm, since the government can claim ownership of the property upon which the business would reside. It is also important to note that Group 1, 2 and 3 economies all scored very low in this metric, with a considerable increase in performance noted between Group 3 and the most advanced and mature classification of Group 4. Thus, outperformance in the context of this study is a highly relative term, and should not be taken to imply that a lack of private property rights is not a concern in Egypt.

explored in Section D as the factor that most markedly inhibited the creation of a positive entrepreneurial environment in Egypt during the years prior to the Arab Spring.

Table 19. Egypt's Performance in Key Entrepreneurship Metrics

Variables Associated with Entrepreneurship for All Groups and Group 2 only

Metric	Egypt	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean	MENA Mean
<i>Percentile Rank among sample of 102 developing countries in Parenthesis*</i>						
WB Regulatory Quality	-0.1810 (47.1%)	-.5437 (25.5%)	-.3505 (36.3%)	.1514 (61.8%)	.9611 (92.2%)	-.1227 (51.0%)
HH Property Rights	40 (59.4%)	29.57 (21.8%)	34.09 (45.5%)	39.11 (53.5%)	64.06 (91.1%)	41.56 (63.7%)
BTI Private Property	7.0 (55.9%)	5.514 (27.8%)	6.136 (37.6%)	7.482 (65.3%)	9.094 (89.1%)	6.531 (47.5%)
WB Control of Corruption	-0.5561 (42.2%)	-.7010 (33.3%)	-.4892 (45.1%)	-.2310 (61.8%)	.6968 (91.2%)	-.1061 (68.6%)
HH Freedom from Corruption	28 (38.6%)	26.46 (29.7%)	31.36 (48.5%)	37.14 (64.4%)	57.81 (93.1%)	40.25 (72.3%)
HH Overall Freedom	59.1 (44.6%)	54.62 (23.8%)	57.64 (38.6%)	62.32 (59.4%)	70.60 (93.1%)	60.73 (52.5%)

*Percentile ranks of mean values are approximations based upon the rank of the country's score the mean most closely equates to.

Source: Author's calculations based upon data from Bertelsmann Transformation Index 2012 (BTI), World Bank Governance Indicators 2010 (WB), and Heritage House Economic Freedom Scores 2011 (HH).

The results of the discriminant analyses conducted in Chapter II indicated five potential variables were most important in classifying Group 2 countries from their more economically advanced counterparts in Group 3. Specifically, BTI Management Level of Difficulty, WEF Technological Readiness, WB Voice and Accountability, BTI Organization of the Market and Competition and HH Fiscal Freedom were found to discriminate between groups in either the model conducted with only Group 2 and 3

countries included or the model inclusive of all countries in the study. Egypt performed within the range of expectations in three of the five variables, and outperformed in relation to group and regional competitor means in one. However, in the World Bank's Voice and Accountability metric, Egypt's performance was considerably beneath all group means, including the least economically advanced countries in Group 1. This suggests that a lack of voice of the people in government and a lack of accountability to the people by government in Egypt not only was a likely factor in the uprising that led to the "coupvolution" but also was an issue that precluded Egypt from advancing to a more mature economic stage.

Table 20. Egypt's Performance in Key Advancement Metrics

Significant Variables in Classifying All Groups and in Classifying Group 2 vs. 3

Metric	Egypt	Group 1 Mean	Group 2 Mean	Group 3 Mean	Group 4 Mean	MENA Mean
<i>Percentile Rank among sample of 102 developing countries in Parenthesis*</i>						
BTI Management Level of Difficulty**	5.6 (60.8%)	3.21 (17.6%)	5.05 (50.0%)	5.92 (64.7%)	7.80 (82.2%)	5.25 (52.0%)
WEF Technological Readiness	3.32 (48.0%)	2.83 (19.6%)	3.32 (48.0%)	3.64 (69.6%)	4.53 (92.2%)	3.71 (70.5%)
WB Voice and Accountability	-1.204 (13.7%)	-0.536 (35.3%)	-0.781 (32.4%)	-0.043 (63.7%)	0.499 (85.3%)	-1.11 (15.7%)
BTI Organization of Market and Competition	6.0 (36.3%)	5.51 (22.5%)	5.84 (31.4%)	7.46 (67.6%)	9.03 (88.2%)	5.97 (33.3%)
HH Fiscal Freedom	89.6 (84.3%)	77.2 (31.4%)	84.5 (68.6%)	81.4 (52.9%)	82.2 (53.9%)	89.4 (82.4%)

*Percentile ranks of mean values are approximations based upon the rank of the country's score the mean most closely equates to.

**For consistency, this metric has been rescaled to reflect higher scores equating to less difficulty (the more desirable environment).

Source: Author's calculations based upon data from Bertelsmann Transformation Index 2012 (BTI), World Economic Forum (WEF) Global Competitiveness Report 2010-2011, World Bank Governance Indicators 2010 (WB), and Heritage House Economic Freedom Scores 2011 (HH).

Thus five independent variables representing three distinct topics have been herein identified as potential causes of the economic futility displayed by the Mubarak regime. In the following section, issues prevalent in the Egyptian labor markets that create inefficiencies will be explored, as will governmental corruption, and deficiencies in the voice given and governmental accountability to the people. These three thematic areas, through quantitative and comparative analysis have been shown to be highly correlated to Egypt's poor economic performance, and may potentially be causal areas of concern.

D. ANALYSIS OF MUBARAK REGIME'S PERFORMANCE IN KEY AREAS

1. Labor Market Efficiency and Freedom in Mubarak's Egypt

Labor markets are a complex segment of an economy with many facets contributing to their relative effectiveness. Thus, more specificity is required regarding the particular components of the Egyptian labor markets which preclude them from performing efficiently. An examination of the particular areas of deficiency in the Egyptian labor markets revealed five specific elements requiring attention. Though these areas are derived from those metrics in the WEF data set wherein Egypt's performance was particularly poor, the HH Labor Freedom variable will also be addressed through consideration of these factors. They are 1) Cooperation in Labor-Employer Relations, 2) Redundancy costs, 3) Reliance on Professional Management, 4) Brain Drain and 5) Women in labor force.⁹⁴ This section will provide a brief explanation of these particular areas of concern, how they relate to one another and the effects these deficiencies create in the economy as a whole. It will further explain how the failures of the labor markets help to create and exacerbate the issue of a large informal economy, the existence of which retards economic growth in Egypt.

The labor market in Egypt is generally more contentious between employers and employees than average. This may in part be explained by the low reliance upon

⁹⁴ These were identified through analysis of the specific elements making up the WEF factor of "Labor Market Efficiency," and Egypt's performance in each. Of the nine elements comprising the factor, Egypt's rating was particularly deficient in these five.

professional management in favor of nepotism and patrimonial relationships. There is a cultural aspect to this which may be difficult to overcome. However, the productivity of the workforce is undoubtedly undermined through this phenomenon. The workforce in Egypt is performing below capabilities and expectations according to the studied metrics, which results in poorer economic performance on a firm by firm basis, and ultimately undermines the productivity of the country as a whole. Redundancy costs in Egypt are exorbitant. Specifically, nearly 2.5 years of salary is required to fire a tenured worker, and over 6 months of salary is standard even for a worker only employed for 5 years.⁹⁵ This precludes employers from dismissing the least productive workers, and thus prevents them from replacing these employees with potentially more productive (and presumably currently unemployed) workers. Once again, poorly conceived laws prevent maximization of productivity. The result is a less-than-optimal workforce, which is exacerbated by the final two issues in the labor market: the brain drain and lack of female participation in the workforce. Due to the previous (and ongoing) political instability, cultural issues inherent in a largely Islamic society and lack of opportunity (among other reasons), Egypt does not keep many of its best minds, nor does it exploit the talents of the women that might potentially enrich it. Thus, the potential of the Egyptian labor force is weakened, further detracting from the overall performance of the economy. These failures, along with the others touched upon herein, prevent the Egyptian labor market from performing efficiently. Exacerbating the problem is the fact that “in the absence of a well-functioning labor market, informal labor activity persists in many sectors” of the Egyptian economy.⁹⁶ Essentially, the labor market issues create a business environment in which the norm involves paying workers in cash and producing illegitimate accounting documents in efforts to reduce taxation and avoid adherence to labor laws. This results in the creation of an unofficial or “shadow” economy which, while present in many developing countries, is particularly prevalent in Egypt.

⁹⁵ World Economic Forum, “*The Global Competitiveness Report*,” 2011–2012, 169.

⁹⁶ Heritage House Index of Economic Freedom, Egypt (accessed August 18, 2012), <http://www.heritage.org/index/pdf/2012/countries/egypt.pdf>.

There are significant difficulties associated with the existence of this shadow economy. In 2004 the shadow economy employed 43.0% of working Egyptians.⁹⁷ This dwarfed both the 26.5% employed by the public sector and the 30.5% employed by the private sector.⁹⁸ All shadow economy business and property was estimated in 2004 to be worth \$248 billion, or approximately \$400 billion in 2011 dollars. Compare this to the GDP of Egypt, which was estimated by the World Bank at \$219 billion in 2010.⁹⁹ This huge shadow economy is counterproductive to long-term economic growth for several reasons. First, underground businesses lack access to organizational structures that may foster growth (i.e. they are unable to incorporate, cannot become publically traded, etc.). Also, owners cannot issue bonds to get credit, which limits their ability to grow and serve new markets. It is also difficult for these businesses to get the best technical help and management since contracts are not enforced through normal legal mechanisms.¹⁰⁰ Finally, an extensive bureaucracy in Egypt prevents the spawning of new businesses, as well as the admission of shadow economy businesses into the legal economy. When coupled with the previously discussed inefficiencies in the labor markets existent in Egypt, the ineffective and redundant bureaucracy and laws that can frustrate and discourage potential entrepreneurs, the result is an environment that ultimately serves to keep these businesses in the shadow economy. This both hinders their growth and prevents government oversight and taxation, ultimately diminishing the overall economic growth of the country.

⁹⁷ Other estimates of the shadow economy in Egypt dwarf even this figure. See for example Friedrich Schneider and Dominik H. Enste, "Shadow Economies: Size, Causes and Consequences," *Journal of Economic Literature* XXXVIII, (March 2000), 80, in which the shadow economy of Egypt as a percent of GDP from 1990–1993 is estimated at 68–76%. Though these figures are from a less recent source, it is unlikely that the shadow economy of Egypt decreased in size to that degree in the last 10–15 years, thus exposing the ambiguity present in estimations of this phenomenon.

⁹⁸ Data extrapolated from numbers in Hernando DeSoto, "Egypt's Economic Apartheid," *The Wall Street Journal*, February 3, 2011.

⁹⁹ Estimates for GDP from The World Bank Development Indicators (accessed March 3, 2012), <http://data.worldbank.org/country/egypt-arab-republic> and estimates for shadow economy from DeSoto, "Egypt's Economic Apartheid."

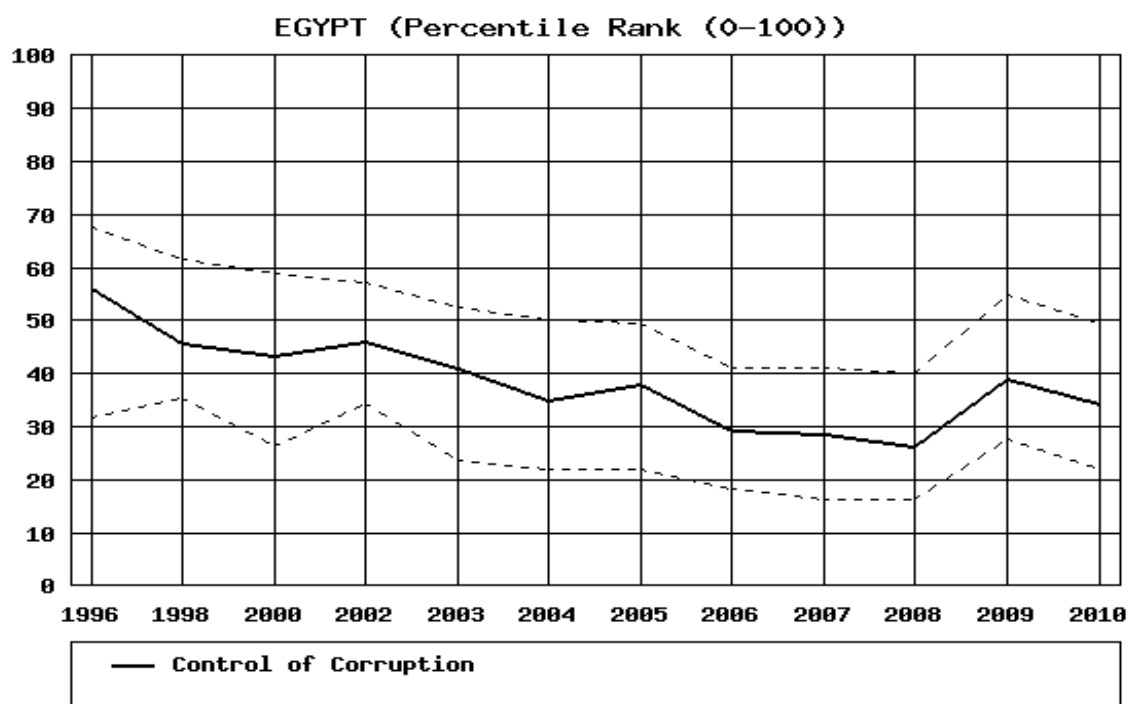
¹⁰⁰ This section draws heavily from DeSoto, "Egypt's Economic Apartheid."

2. Freedom from and Control of Corruption in Mubarak's Egypt

Corruption is prevalent in Egypt, as it is in most developing economies. According to the Global Integrity Report (GIR), “even before the citizen-led revolution that rocked Egypt in January 2011, the country had been experiencing a slow and steady decline in the performance of its anti-corruption and transparency institutions.”¹⁰¹ Figure 3 shows the decline in the control of this corruption, supporting the conclusions of the GIR. It was presumably the poor trend of this metric, as well as its current unsatisfactory rank, that resulted in the mandate for change and improvement expressed by the citizens of Egypt in early 2011. Prior to the coupvolution, “corruption (was) perceived as widespread...bribery of low-level civil servants seem(ed) to be a part of daily life, and there (were) allegations of significant corruption among high-level officials.”¹⁰² As these comments suggest, significant documentation exists regarding the presence of and lack of institutional control of corruption by the government (inclusive of its potential involvement). However, it is the purpose of this paper to link this corruption to economic inefficiencies; specifically in this case to spawning an environment not conducive to entrepreneurship. Thus, while there is little doubt that this widespread corruption was not controlled by the Mubarak regime, the assertion of this paper that will be explored more completely in this section is that this failure contributed to the creation of a poor business environment retarding potential entrepreneurship in Egypt.

¹⁰¹ Global Integrity Report, Egypt, accessed March 3, 2012, <http://www.globalintegrity.org/report/Egypt/2010/>.

¹⁰² Heritage House Index of Economic Freedom, Egypt (accessed August 18, 2012), <http://www.heritage.org/index/pdf/2011/countries/egypt.pdf>.



Source: Kaufmann D., A. Kraay, and M. Mastruzzi (2010), *The Worldwide Governance Indicators: Methodology and Analytical Issues*

Note: The governance indicators presented here aggregate the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, and international organizations. The WGI do not reflect the official views of the World Bank, its Executive Directors, or the countries they represent. The WGI are not used by the World Bank Group to allocate resources.

Figure 3. Egypt Control of Corruption Ranking (1996–2010)

Within the MENA region, corruption is a significant constraint to business in many countries, though this problem is not uniform. Egypt has been identified through World Bank enterprise surveys as a member of the cadre of countries for which corruption is seen as a major constraint by businessmen, along with Lebanon, West Bank and Gaza, Syria and Yemen. Businessmen from other MENA countries such as Jordan, Algeria, Morocco, Oman and Saudi Arabia report corruption as a much less significant constraint to their firms.¹⁰³ The WEF provides evidence for the assertion that improving freedom from corruption is a critical factor in fostering entrepreneurship through the inclusion of corruption as a potential factor considered most problematic for doing

¹⁰³ For exact percentages of firm managers who rate corruption as a major or severe constraint to their business in each country, see Benhassine, *From Privilege to Competition*, 92–93.

business in its Executive Opinion Survey. In this survey, businessmen in each participating country are asked to choose amongst 15 potential factors and rank in order the five most problematic for doing business in their opinion. In the case of Egypt, corruption was cited as the most problematic factor for doing business, with a weighted average of 19% which was far and away the most prevalent of any potential concern.¹⁰⁴ Thus, the required bribes and “under the table” dealings appear to have significant economic consequences in constraining firms by “distract(ing) managers from running their businesses, impeded(ing) certain areas, or mak(ing) types of operation more vulnerable to rent seeking.”¹⁰⁵ Therefore, combining the data from these sources, Egypt is an economy in which corruption is pervasive, and that corruption detracts from the productivity of current businesses.

It is likely that the effects of corruption are not only detrimental to current businesses, but also upon potential start-ups. One can, with a high degree of confidence, extrapolate from these results that potential entrepreneurs are inhibited from starting businesses just as current entrepreneurs are sufficiently concerned to identify corruption as the largest problem of any of the 15 structural or institutional elements proffered in the Executive Opinion Survey. This corruption can also be linked to the prevalence of the shadow economy, as legitimate businesses are often subject to the same indiscretions as illegitimate, reducing the advantages of becoming part of the official economic apparatus of the country. Corruption thereby provides the genesis for the poor entrepreneurial environment and lack of incentive to participate in the licit economy in Egypt.

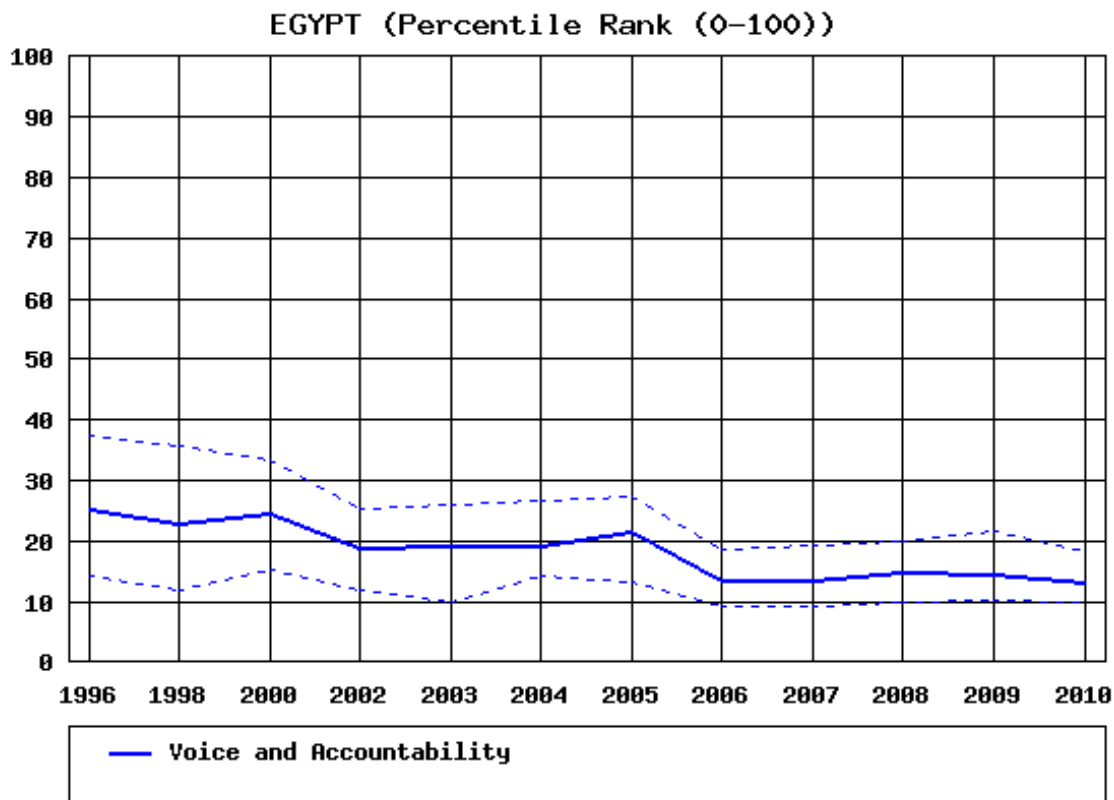
3. Voice and Accountability in Mubarak’s Egypt

Egypt ranked 89 out of the 102 countries in this study in the voice and accountability metric. Similar to the trend observed in the control of corruption variable, Figure 4 shows a steady decline in voice and accountability in Egypt from 1996 through 2010. This decline no doubt served as a significant catalyst for the initiation of the Arab Spring movement which ultimately ousted Hosni Mubarak. Considering the importance

¹⁰⁴ World Economic Forum, “*The Global Competitiveness Report*,” 2010–2011, 148.

¹⁰⁵ Benhassine, *From Privilege to Competition*, 93.

of the expectations of the population when determining the potential effects and consequences of performance in any metric, this decline is likely as important (if not more so) than the absolute measure. This is because superior performance in the past (though marginal) may have created an expectation that increasingly failed to be met by a regime that provided fewer and fewer outlets for participation and became less and less accountable to the public in recent years.



Source: Kaufmann D., A. Kraay, and M. Mastruzzi (2010), *The Worldwide Governance Indicators: Methodology and Analytical Issues*

Note: The governance indicators presented here aggregate the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, and international organizations. The WGI do not reflect the official views of the World Bank, its Executive Directors, or the countries they represent. The WGI are not used by the World Bank Group to allocate resources.

Figure 4. Egypt's Voice and Accountability Ranking (1996–2010)

As discussed in Chapter III, it is difficult to determine a direct link between improved perceptions of ability to participate and have freedoms within a country and its economic performance, and this section of this thesis will not attempt to do so. However, it is less difficult, and in fact quite evident, that there is a positive correlation between democracy and economic advancement, with nearly all of the most advanced economies in the world rated as “free” by Freedom House.¹⁰⁶ The findings in this thesis confirm this link, and ultimately suggest that it is self-evident that improving the voice of a country’s citizenry will have positive economic effects. These effects include, in the case of Egypt, reducing the unchecked corruption currently constraining Egypt’s economy (in which governmental officials have been implicated) as a function of becoming more answerable to the people. Also, policy construction and implementation in Egypt may be due to high level positions being filled based more upon merit than familial or patrimonial networks; this as a direct result of government becoming more accountable to the populous.

E. CONCLUSION

The causal elements of economic ineptitude manifest in Egypt during the final years of the Mubarak regime are results of both authoritarian leadership implementing typical methods of power consolidation and counterproductive laws and norms that fail to exploit the talents and resources inherent in the society. Improvements in both economic policy (inclusive of legal reform and bureaucratic simplification) and political structure are required to best effect positive change. The economic and political issues with which this large and complex country is faced are innumerable. Many of the most often analyzed areas of concern were mentioned only briefly in this chapter, including the problems inherent in a largely rentier economy and an education system that fails to meet expectations, particularly at the primary level.¹⁰⁷ It is therefore in no way suggested that the conclusions of this analysis present a complete picture of the deficiencies of the

¹⁰⁶ Freedom House, Freedom in the World (accessed August 19, 2012), <http://www.freedomhouse.org/report-types/freedom-world>.

¹⁰⁷ Egypt ranked 126th out of the 139 countries analyzed in the 2010–2011 Global Competitiveness Report in the “Quality of Primary Education” metric. World Economic Forum, *“The Global Competitiveness Report,”* 2010–2011, 149.

Egyptian economy, nor the areas that must be addressed to create prosperity. Rather, the conclusions of this chapter are offered as a starting point, from which many of the other, often overlapping issues prevalent in Egypt may be addressed as corollary to these focus areas.

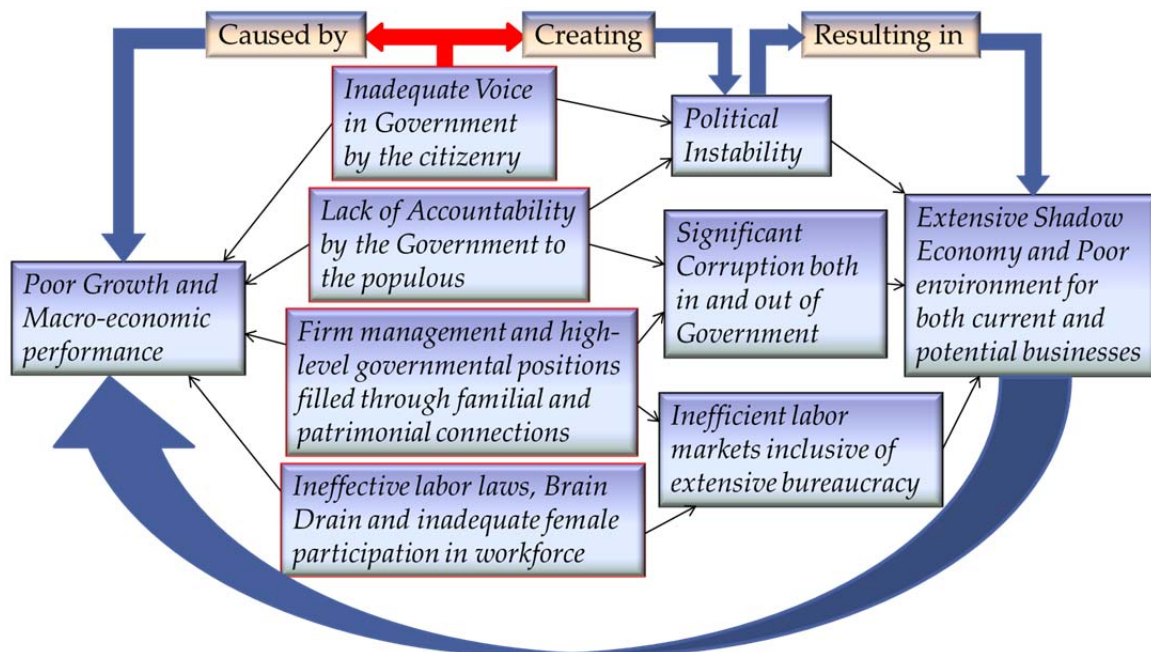


Figure 5. Egypt's Vicious Cycle

Figure 5 expresses the main findings of this research for the particular case of Egypt. The lack of voice and accountability has been a consistent theme of inadequacy throughout this thesis; this is unsurprising considering the countries analyzed in the study were chosen due to a change in government occurring as a result of some manner of revolution. The authoritarian regimes ousted via Arab Spring uprisings all failed in this regard, and the Mubarak regime in Egypt was certainly no exception. For Egypt, this lack of accountability resulted in extensive corruption in addition to the obvious political instability it created, which contributed to a large informal economy and an economic environment not conducive to entrepreneurship. A less political concern more based upon societal norms and ineffective laws is the issue of labor markets. In this area, both inside and out of government, the patrimonial and familial linkages that provide pathways to power and success create inefficient labor markets inclusive of a dissatisfied

and often disenfranchised labor force—particularly professional and management-level workers. Moreover, these inefficient labor markets—combined with a laboriously extensive bureaucracy saturated with corruption—inhibit business growth and leads to a lack of incentive for businesses to engage in the legitimate economy of Egypt. Thus, the advantages which might become manifest as a consequence of participation in the licit economy by businesses (such as legal protections through incorporation and access to external investment monies through becoming a publicly-traded company) are not exploited by many businesses. This in turn retards their potential growth, and also prevents the government from benefiting from potential income through legitimate taxation. Thus, the vicious cycle of Egypt, at least in this respect, is clear. Though far from comprehensive, the issues explained and analyzed herein, if focused upon by the incoming government of Egypt, may provide the first steps on the path to economic success for the country.

VI. CONCLUSION

The statistically-based methodological structure utilized in this thesis is the foundation of the work, and can be applied to any developing economy. It is therefore important that implications of the research not specific to the particular countries studied herein are intimated as they may suggest areas for further study. While the genesis of this work was a product of the events of the Arab Spring, due to the unique circumstances of near-simultaneous regime change in several MENA countries which suggest significant opportunity for change exists within them, the results of the statistical work undertaken has the potential to be utilized by any developing economy. The conclusions of each chapter are an attempt to determine the areas for the incoming governments of these countries to prioritize most highly, and those conclusions will not be reiterated here; however, the more general conclusions that may provide areas for further research should be examined in more detail. No information not previously discussed will be contributed in this concluding chapter. These areas for further research are ideas that have been considered in the body of this thesis, though they were not integral to the conclusions derived for the specific countries analyzed resultant of their Arab Spring experience.

The statistical correlations determined in Chapter II intimated other potential insights not specific to the three countries focused upon in this study. Beyond the country-specific conclusions intimated in the final sections of Chapters III, IV, and V, this study provides evidence for at least three important conclusions of a more fundamental and generally applicable nature. First, it is rare in quantitatively-based studies to have such unambiguous and strong results as those derived in Chapter II regarding the correlation between economic growth and efficacy of labor markets for developing economies. Although this link has been considered and analyzed by scholars in the past, this work provides convincing quantitative evidence that a strong correlation does, in fact, exist between improvement in labor market efficiencies and freedoms and

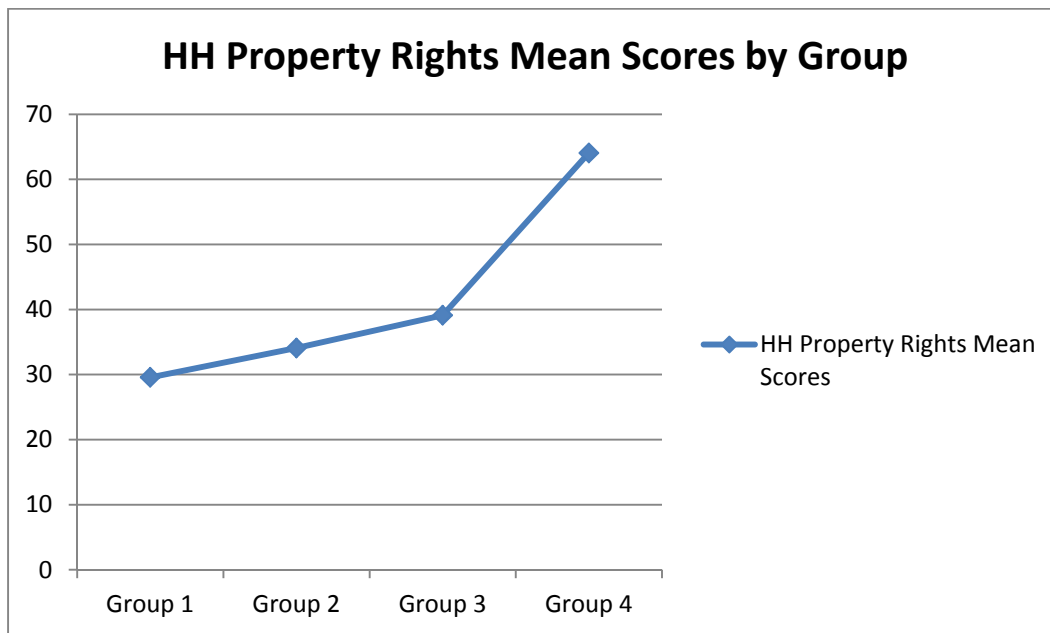
the overall economic growth a country enjoys.¹⁰⁸ This may provide focus for further research projects in developmental economics, particularly in determining the specific areas of labor markets in a polity that retard growth, and finding methods whereby these issues may be remedied.

Second, the common link between the three country-specific analyses conducted in the previous chapters was extremely limited participation in government by the people and a lack of accountability to the people by those governments. This was evidenced by the uniformly egregious performance in the WB Voice and Accountability metric in all three countries studied. In fact, they were all among the bottom 13 countries in this metric of the 102 country data set. Not only does this work examine the unique ways in which this deficiency contributed to poor economic performance, it also implies that this metric, more than any other, is linked to high potential for instability, as all three of the governments studied were ultimately overthrown. While this conclusion may at first appear obvious, other variables (for instance WB's Political Stability) may also have been determined to exhibit this relationship, but did not—at least not to the same degree as the voice and accountability metric. This may suggest there is predictive value to the metric heretofore unproven, which may also prove useful in subsequent research.

Finally, as was briefly touched upon in Chapter V, an interesting observation regarding the HH Property Rights variable and group advancement suggests an area for potentially beneficial further research. Specifically, though a slight improvement in protection of private property rights was observed beginning with the least advanced economies, there was dramatic improvement in this metric in the most advanced economies compared to all other groups. This massive increase from a percentile rank of 53.5% for Group 3 countries to 91.1% for Group 4 was the largest such gap of any independent variable for which a calculation was made. This may suggest that legal protection of property rights is a vital area for which improvement is necessary to reach

¹⁰⁸ See Julie C. Devlin, *Challenges of Economic Development in the Middle East and North Africa Region: World Scientific Studies in International Economics*, Vol. 8. (London: World Scientific, 2010) for one such analysis, wherein she dedicates a chapter to the proposition that labor markets may be the key to economic growth for MENA countries.

the most mature stage of economic development. Figure 6 graphically depicts this phenomenon; further research may elucidate the implications this observation offers.



Source: Author's calculations based upon Heritage Foundation's Index of Economic Freedom Scores

Figure 6. HH Property Rights Scores by Group Categorization

More germane to the focus of this thesis, and beyond these general observations, is the assertion that the power transitions precipitated by the Arab Spring revolutions afford opportunity for significant positive political and economic change. However, the specific areas in which improvement is most essential to generating economic advancement are less obvious than those associated with improved governance, and are less likely to be uniform across all countries involved. In consideration of that assertion, this thesis has identified areas most correlated with economic growth, the fostering of a positive entrepreneurial environment and progression to a more advanced economic stage of development through employment of two distinct statistical methods, and applied them to three North African countries affected by the Arab Spring revolutions. Areas in which improvement is required to create positive change that are specific to each economy studied have thereby been determined. The cases of pre-Arab Spring Libya, Tunisia and Egypt were examined in an attempt to provide guidance and focus for the enormous tasks

of governmental construction and reform the incoming administrations of each country will face. The ultimate outcome of the analysis involved an expression of the vicious economic cycle unique to each, including a determination of causal factors identified as areas in which improvement will be most likely to favorably transform their economies.

The uniqueness of each vicious cycle is a product of each country's performance in the specific areas found through statistical analysis to be correlated to economic growth, creation of a positive entrepreneurial environment or advancement to a subsequent stage of economic development. Although there was some overlap observed among themes vital to the countries in the study, the results of the analysis undertaken herein elucidated focus areas distinct to each country's particular circumstances that are dependent upon the current structure of each economy, enhancing the value of the approach. The number of areas upon which Libya must focus in order to improve its economy suggests that the task of developing a healthy economy from its current structure is far more difficult than that present in the current situation of either Tunisia or Egypt. However, the relatively small population of the country, combined with its hydrocarbon wealth, may provide the tools necessary to implement change successfully—if the areas causing its vicious cycle are properly managed. The situation in Tunisia appears less dire, with policies that allow the natural maturation process of the economy to occur without interference potentially being sufficient to effect positive change. In Egypt, the size and complexity of the economy complicates the process of creating and implementing change, despite less extensive areas requiring address. In all three cases, the conclusion of this work intimates that improving the areas identified as causal to its economic vicious cycle will produce the best results in efforts to revitalize the condition of each post-Arab Spring economy.

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